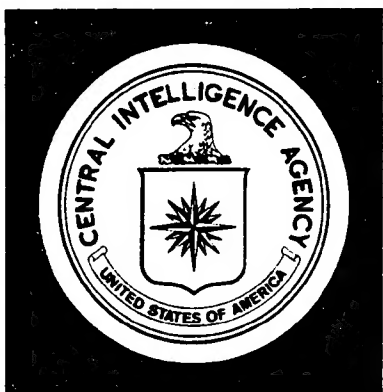


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NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

THE YEARS OF PROJECT HTAUTOMAT, 1956 - 1958

VOLUME III

*by*



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NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER  
THE YEARS OF PROJECT HTAUTOMAT, 1956 - 1958

VOLUME III

*by*



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VOLUME IIIVIII. HTAUTOMAT Becomes the Photographic  
Intelligence Center

The period of waiting between submission of the proposal to create a CIA Photographic Intelligence Center and announcement of the decision to do so stretched out over several months. In a dynamic organization such as HTA, with a highly salable product, there was, however, little danger of just marking time. Though only one mission was flown over the USSR, and that in the Far East on 1 March, the Indonesian affair was warming up, and by summer there would be a new crisis in the Middle East. Moreover, JAM SESSION was not yet ended. Installations still awaiting joint action by PIs, intelligence analysts, and consultants, though in no respect as important as those studied earlier, guaranteed that there would be one last fling with the outside experts.

A. The Last Months of JAM SESSION

During the spring of 1958, work related to Project JAM SESSION consisted not only of preparations for the final consultant meetings, which would deal with Soviet heavy water and uranium mining and milling facilities, but also of a broad range of activities intended to



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consolidate the gains stemming from the earlier consultant meetings. Among the latter were efforts to publish PI reports on the two Soviet guided missile test centers, provide PI keys to guide HTA interpreters dealing with high-priority scientific and technical installations, familiarize more Military-Scientific Branch PIs with domestic counterparts of Soviet installations in whose interpretation they would be engaged, and obtain approval for use of COMINT in the MSB work area on the seventh floor of the Steuart Building.

1. COMINT Comes to MSB

After months of planning and negotiations, in March 1958 the Military-Scientific Branch was granted permission to have and use COMINT documents along with other collateral documents and photography. 411/ Though the MSB work area was vaulted, like most others in the Steuart Building, this permission was contingent on the installation of a lock and buzzer system for positive control of entry to the vault even during normal working hours. The singling out of MSB for exceptional treatment at this time was a direct result of the special need for COMINT information demonstrated during the previous fall in the exploitation of JAM SESSION installations. It was of immediate and particular usefulness in the preparation

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of materials for the remaining JAM SESSION consultations as well as work done on manuscripts for the PI reports on the Kapustin Yar and Tyura Tam Missile Test Centers.

2. A Bear by the Tail

[ ] chief, MSB, had been designated the chairman of the JAM SESSION photo interpretation effort on the Kapustin Yar Missile Test Center and [ ] of the Army, his deputy. For the Tyura Tam Missile Test Center the positions were reversed, with [ ] serving as chairman and [ ] as his deputy. 412/ Thus, as the publications effort got under way in the spring of 1958, [ ] was presumptively in charge of the effort to prepare the PI report on Tyura Tam and [ ] the staggering job on KY. The joint effort, in both cases, was being carried on, as in all similar reporting, in the space devoted to such work in the MSB area. Moreover, it was then the custom of MSB regardless of the organizational affiliation of the chairman of joint projects, to assume responsibility for monitoring production of graphics, for typing the manuscript, for ordering photography, and all such mechanical details. 413/ Thus, the March and April 1958 MSB monthly reports made the optimistic observation that manuscripts for reports on both the

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KY and TT installations were in the final stages of preparation for publication. 414/ Before long, it must have become apparent that, in the KY manuscript, MSB had a real turkey on its hands. During May, [ ] wrote a 25X1  
memo addressed jointly to [ ] who by then had 25X1  
accepted the dubious honor of also chairing the KY project), [ ] and the "Editorial Staff," outlining how 25X1  
MSB photo interpreters would continue to "pull together the many parts of the KY report," and how he, [ ] 25X1  
would review the manuscript in detail, with a view to completing it by 31 May. He added that he and [ ] 25X1  
together would then examine the manuscript in detail to assure that it was completely acceptable to [ ] before 25X1  
forwarding it to the Editorial Staff, hopefully by 15 June. 415/

That these implied promises of early publication were premature was suggested by a lack of information on the same subject in subsequent MSB monthly reports. In reality, both manuscripts were casualties of attempts to ramrod materials not yet in finished form through to publication. These were also days when MSB was vigorously pursuing the concept that the most expeditious procedure for publishing reports was to limit the editors to a copy edit of text prepared by the PIs, and to foreclose

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possibility of more than very minor editorial changes on illustrations prepared in the graphics shop. Indeed, [ ] ordered that the graphics for both reports be shot in final form in the lab prior to submission of text to editors, and in at least one instance delivered the graphics to the lab himself.

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Even [ ] who was earnestly attempting to get agreement on procedures for the handling of HTA projects, got into the act. One day in March, he appeared unexpectedly in the room occupied by the two editors, [ ]

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[ ] In his hands was a very large envelope containing a jumble of graphics and text for the projected Tyura Tam report. He announced that he would soon call a meeting of MSB and graphics representatives plus the editors. Interestingly, [ ] the nominal chairman was not included. [ ] stated that he had perused the manuscript and believed it was not fit to edit. He requested that the editors examine it and be prepared to offer testimony at the meeting. Then he left.

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In due course the meeting was called and [ ] appeared to chair it. Obviously, he was expecting strong support from [ ] who was *de facto* head of the editorial shop and already the object of much criticism by MSB personnel as well as leaders in the graphics shop. To

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the surprise of [ ] and probably the MSB and graphics 25X1  
representatives as well, [ ] refused to endorse 25X1  
[ ] appraisal of the manuscript. On the contrary, he 25X1  
adopted the position that anything sent to the editors  
was, *ipso facto*, fit to edit.

This unexpected assertion, from which [ ] refused 25X1  
to deviate during the course of an extremely unproductive  
discussion, gave him the conscious satisfaction of ad-  
hering to his principles under considerable pressure.  
Predictably, it won him no friends. To MSB supervisors,  
it was clear that [ ] was, in effect, telling them 25X1  
that he was prepared to "worry through" the manuscript,  
aided by periodic consultations with the PIs, and that  
supervisors would not be encouraged to transgress on the  
confidences exchanged between an editor and his clients.  
To graphics representatives, it was evident that questions  
involving graphics would be settled in the bilateral  
negotiations between editor and photo interpreter, thus  
denying graphics personnel an active role in the final  
review of the manuscript. One could only speculate on the  
thoughts that coursed through [ ] mind as he found him- 25X1  
self out on a limb in his attempt to establish more ef-  
fective procedures for assigning responsibilities in the  
processing of manuscripts for HTA reports. It would not

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be unrealistic to assume they were unprintable. In [ ] there were joined an unusually happy faculty for the evocation of vivid mental pictures and an exceedingly colorful vocabulary for describing them.\*

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The TT manuscript came to life again in June 1958 when [ ] the deputy in the graphics shop, appeared at the entrance of the room occupied by the editors. In a conversation that began in a cautious and diffident manner, they revealed the fact that a new attempt to prepare the manuscript for publication was imminent. [ ] asserted that he was personally taking charge of the effort and intended to rewrite the entire text, preferably with the guidance and counsel of an editor whom he would like assigned full time to the project for at least several weeks. [ ] expressed a strong desire to have the graphics shop assume the

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\* It should be noted that this was not the only such meeting chaired by [ ]. On a number of other occasions within the next several months, [ ] would attempt to resolve publications problems by sitting down with representatives of the editorial shop, the graphics shop, and MSB. Moreover, when [ ] first returned to the Steuart Building to function as a Special Assistant in the Office of the Chief, as the transfer to HTA of Central Branch personnel approached, his most important assignment was the solution of procedural and other problems relating to the publication of HTA reports. These negotiations were made difficult and progress was slow because of the maneuvering for political advantage of many of the participants. For the record, it should be noted that [ ] did not shrink from a task that he almost certainly knew would be frustrating and, at time, humbling.

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responsibility for the preparation of the printed forms, which would consist of fully integrated text and graphics for the publication of a report in the new outside format measuring 14 by 18 inches.

In the course of an amiable, if not animated, discussion, [ ] expressed a preference for a report consisting of separate text and graphics, but left the question open. [ ] favored a fully integrated report. The result of the exchange was the assignment of [ ] to work with [ ] on the preparation and editing of a new text which was to be fully integrated with the accompanying graphics. The text would be typed on the Justowriter, which was still situated in the editorial shop on the fifth floor, but would be composed in the graphics shop on the sixth floor. Specifications for reproduction would be prepared in the graphics shop.

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Though there were as yet no firm guidelines issued for the preparation and publication of joint photographic intelligence reports in HTA, these ad hoc decisions provided a *modus vivendi* with which all participants could live. Though control of the project by MSB was substantially precluded as a result of [ ] assumption of full responsibility as project chairman, his substantive decisions in the preparation of the manuscript would have

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to survive the scrutiny of MSB photo interpreters at the time of sign off. For the editors, it placed one of their kind in a key position in the effort to prepare a new text. Though the arrangement fell short of affording the full measure of control envisaged by graphics supervisors in decisions involving the selection and planning of illustrations, [ ] exceptional grasp of the subject and how he wanted it presented, permitted them to use their expertise and imagination in developing his concepts and preparing them for the reader. This phase of the undertaking was directed by [ ]

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This complete reworking of the Tyura Tam manuscript continued into August 1958. The result, published a month later, was a CIA/PIC showpiece comprising 51 pages of text and illustrations, the latter consisting of all types and sizes of graphics. Quite apart from the physical and substantive characteristics of the report, the procedures used and the energy and cooperation displayed in completing the job served, at least in some degree, as an object lesson in one way to produce an HTA photo intelligence report, particularly a large and complex one.

On the credit side of the ledger was, first of all, the dramatic demonstration of the advantage of having the total concept of the report as well as its substantive

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content under the firm direction of a highly competent photo interpreter. Such a situation energized the specialized talents of support personnel without providing a leadership vacuum into which all participants could rush to acquire the largest possible piece of the action. Less obviously on the credit side of the ledger was the carefully composed graphics and text, with the latter in columns justified on both the right- and left-hand margins. That such a physically attractive report served to excite favorable comment and reflect credit on the rapidly developing capability of a young organization fighting for its place in the sun cannot be doubted. From the beginning, however, many of those not emotionally involved in defending the course of development being set and advocated by the chief of the graphics shop and his deputy, doubted the wisdom of investing the manpower and machines needed to add the cosmetics. This question was to be a perennial one and reappears at frequent intervals in the future history of NPIC.

More obviously on the debit side of the ledger was the use of an editor in the preparation of the manuscript. Unless it proved to be an exception, the full-time services of an editor for such a prolonged period as well as his almost total involvement in the preparation of the

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manuscript was difficult to justify. Not only did it virtually double the manpower needed to write the text but it also precluded the editor examining the completed manuscript with the detached view of an uninvolved critic. On the other hand, in this role the editor was able to offer valuable guidance and assistance in the preparation of the manuscript at a time when procedures were vague and no style manual for HTA publications was yet available.\* Moreover, it should be noted that such use of an editor effectively neutralized what was regarded, rightly or wrongly, by many -- but by no means all -- HTA photo interpreters as one of the most difficult obstacles in the publications process.

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\* As early as the summer of 1957 when editorial responsibilities and judgments first became controversial, [ ] had directed [ ] to prepare a style manual. [ ] the senior editor, was on an extended vacation on the West Coast but returned in time to review the first draft before it was passed on to [ ] for review and coordination and comments from the branches. In those days, before the advent of the Xerox machine, no duplicate was made, and the sole copy mysteriously disappeared while in the process of coordination. It reappeared just as inexplicably nearly six months later when MSB was moving from the sixth to the seventh floor of Steuart Building. By that time, because of the rapidly evolving situation in HTA, the style manual was hopelessly out of date. Besides, few, with the exception of [ ] and the author, had any urgent desire to see it published. [ ] avowed position was to keep things as fluid as possible, a position shared by many in the graphics shop and MSB, who, however, had different objectives in mind.

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Progress on the Kapustin Yar manuscript was not revived at this time. In all probability there was a tacit recognition of the fact that any attempt to undertake the much larger task on the KY report concurrently with work on TT would inevitably fail, particularly with [REDACTED] engaged full time on the TT manuscript. Moreover, it would divert manpower from other tasks sufficient to jeopardize the successful conclusion on ongoing activities.

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### 3. The Show Goes On

While many photo interpreters and others in HTA were struggling with the preparation of PI reports and trying to develop workable procedures for producing them, Lundahl continued his seemingly unending schedule of high level briefings. Though many were reminiscent of the round of presentations to top military and civilian officials in Washington during the previous fall and winter, two were decidedly out of the ordinary. [REDACTED]

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B. Keeping Busy

Even in the Military-Scientific Branch, which had enjoyed a steady diet of JAM SESSION work for months, photo interpreters were not immune from more normal tasks. One of the more exciting among these -- and a task far more challenging than the humdrum activity in the Geographic Branch -- was the production of ODE's. Work on these first-phase reports on Russian penetration missions was always stimulating, since it offered an opportunity to see new targets and, perhaps, to discover others, like the Mozhaysk installation, whose existence was not even suspected.

The Far East mission, flown on 1 March 1958, afforded just such an opportunity. It covered the heart of the Soviet Far East, including cities and installations along the Trans-Siberian Railroad and the area around Sovetskaya Gavan, on the Gulf of Tartary. 446/

Most important and perplexing among discoveries from this mission was an installation, subsequently known as the Malaya Sazanka installation, located about 10 miles southwest of Svobodnyy and similar to those in the vicinity of Mozhaysk and Valday, in European Russia. As might be expected, this discovery rekindled flagging interest in the Mozhaysk problem. It did not, however, result in an

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immediate grandstand effort to publish a definitive report. Not only HTA but also other elements in the Agency and in the Intelligence Community were well aware of the difficulty they faced and the risk of disappointment. Though analysis of the photography was undertaken as soon as possible and the PI information made available to the Community, the overall effort to solve the intelligence problem was undertaken with caution and only after much consultation and planning. Consequently, the major portion of HTA work and the resulting detailed PI report were not available in published form until long after the end of the HTA period.

During the spring of 1958, ill effects suffered in the Geographic Branch during the winter as a result of the dearth of new requirements were substantially eliminated. The change resulted primarily from a dramatic increase in the amount of work for the Economic Research Area of ORR. From 26% of the project time in March, the comparable figure rose to 79% in May and held at 70% in the following month. There was also a modest but significant increase in the amount of time spent on DDP projects. 447/

Most of the increased work for DDP involved area studies in the Balkan States, near Murmansk, and around

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Tyura Tam. In April, requirements for information on installations reported in the Mission Coverage Summary for the 1 March 1958 Far East mission gave a significant boost to the amount of work undertaken for ORR, and a search for possible deployed offensive missile sites in the Soviet Bloc further augmented work done for the same Office.

The requirement for the missile search, in which OSI was also interested, was generated by concern over the total absence of such information in the face of conclusive evidence of medium- to long-range missile development at the Kapustin Yar and Tyura Tam Missile Test Centers. The assignment of this task to the Geographic Branch, in spite of the fact that PI expertise in the interpretation of missile targets rested exclusively in the Military-Scientific Branch, was a reflection of the fact that PIs in the latter branch were busy with higher priority work. Ostensibly, GB photo interpreters, upon discovering a suspected missile site, would turn the evidence over to the Military-Scientific Branch, where the information would be examined, and if validated, published.

In due course, the search produced four sites suspected by Geographic Branch photo interpreters to be missile sites. The ones at Ventspils, USSR, and at

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Kolberg Deep and Bydgoszcz, Poland, were qualified as possible guided missile sites; the one on the Hel Peninsula, Poland, was alleged to be a probable guided missile site. 448/ The Geographic Branch, unmindful of the need to pass such discoveries on to the Military-Scientific Branch for validation, promptly prepared a brief on each of the sites. Immediately following publication of the briefs, which took place simultaneously, several intelligence officers, [REDACTED]

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[REDACTED] came to the

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Steuart Building -- to MSB, whose photo interpreters they assumed had prepared the briefs. When MSB interpreters told them that these were not guided missile sites but old gun positions identifiable on World War II German photography -- a source that PIs in the Geographic Branch had inexplicably failed to consult -- the visitors were very upset and expressed concern about the failure of HTA to speak authoritatively and with one voice. This was particularly true of the installation on the Hel peninsula, which had been called a probable guided missile site. Though swift and effective corrective action was taken by HTA to prevent any repetition of the same mistake by PIs working on this particular project, the continued existence of the two separate and equal detailed

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reporting divisions left the door open to future incidents of this type whenever there was overlap in their exploitation tasks.

First to suffer from this competition with higher priority projects in the Geographic Branch were the urban studies. The March monthly report from the Branch noted that work on the several urban studies was progressing slowly; the April report said that it had been temporarily suspended. 449/

There was one project concerning an urban area that was not deferred, however. The same April monthly report that a pilot study of Komsomolsk, which had been covered by the 1 March 1958 Far East mission, was in preparation for ORR. The purpose of the study was to determine the extent to which answers to questions on targets assigned to attaches could be obtained from TALENT system photography. The study was requested [ ] but

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[ ] were said to be quite interested in the results, which could drastically alter the [ ] 450/

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The project, which was established on 28 April 1958, was assigned to [ ] of the Geographic Branch, but involved close support from the Information Branch of the OCR Statistical Division. Like most other projects

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in which Brugioni, chief of the Information Branch, served as a catalyst, progress on this one proceeded rapidly, and it was completed in exactly one week. 451/ The study, which examined the 39 requirements listed in the Town Brief, demonstrated that at least 35 could be answered better by the use of the existing TALENT photography than by an attache or traveler. 452/

At Lundahl's suggestion, [ ] conferred on 2 May 1958 with [ ] chief of the Geographic Research Area, about city plan production. 453/ One result of this conference was the assignment of [ ] of D/GC to work in the Geographic Branch a few days each week on city plans, with limited assistance from the PIs. 454/ This working arrangement continued through the summer. Thus, the urban studies program, if it could be dignified by such an appellation, became, at least as far as HTA was concerned, merely an assist to an Agency cartographer working on town plans.

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The WAC overlay intelligence program\* suffered a similar fate. Work on this self-initiated project essentially ended by April. 455/ In this case, however,

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\* See p. 324.

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the project was strictly one involving photo interpreters and the product a gratuitous offering. When the pressure of higher priority work increased to the point where no time was left for this project, there was no other competent or interested party to step in and take over any part of the program.

Elsewhere in HTA and at overseas photo interpretation centers, HTA PIs became involved in two historic crises. One was the revolt in Indonesia, the other the threat to Lebanon by its Arab neighbors.

In the case of the Indonesian revolt, 29 U-2 missions were flown from Cubi Point Naval Air Station in the Philippine Islands between 29 March and 7 June 1958 to photograph targets spread over the far-flung Indonesian homeland. The purpose was to obtain timely information for the US Government and, in particular, for the DDP, which was providing operational support to the anti-Communist rebels.

In late March, [ ] of HTA were sent to Clark Air Force Base, in the Philippine Islands, to help establish a photo interpretation facility. [ ] was to serve as deputy commander for intelligence and [ ] was to direct setting up of the film processing equipment. 456/ Film from the first

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mission and all subsequent ones was processed and exploited at this facility, which was 30 minutes by air from Cubi Point. [ ] returned to HTA after completing his assignment, and [ ] was later relieved by [ ] who departed Washington, D.C., on 15 May for the Philippines. 457/

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With the fall of the rebel capital at Bukittinggi, in central Sumatra, on 4 May, the revolt was essentially over, and the United States withdrew its support of the rebel cause. On 9 June 1958, two days after the last U-2 mission was flown over Indonesia, the PI facility at Clark AFB was closed. 458/ [ ] returned to HTA nine days later. 459/

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During late April and early May, when the revolt had reached a critical stage following the landing of amphibious forces by the Indonesian Government on the west coast of Sumatra, crash support was provided at HTAUTOMAT for the faltering operation. Between 21 and 29 April three photo interpretation projects on Indonesian targets were done by the small group under [ ] in the Operations Support Branch. In addition, HTA prepared a photo mosaic of Djakarta. 460/

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HTA photo interpretation support for the Lebanon crisis was confined largely to the [ ] Following widespread civil unrest in Lebanon during the late spring

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of 1958, the tempo of U-2 reconnaissance flights, which had continued at a low level since the Suez Crisis nearly two years earlier, was stepped up. In addition,

[redacted] which had been on standby status for nearly a year, was reactivated on 22 June 1958. 25X1

[redacted] an HTA photo interpreter assigned [redacted] was sent to the [redacted] facility as deputy commander for intelligence. [redacted] who had just returned from the Philippines, replaced him 25X1 25X1 25X1

[redacted] Both men were bachelors and willing to travel. In addition, by this time [redacted] had more experience in such assignments, including the difficult task of starting up operations, than any other working-level PI in HTA. Soon it became apparent that help was needed [redacted] supplanting him as the deputy. 461/ 25X1 25X1

The tempo of work and level of responsibility reached a peak with the US troop intervention. On 15 and 16 July 1958, at the request of President Camille Chamoun of Lebanon, 3,500 US Marines were landed on beaches south of Beirut. 462/ More Marines and Army troops followed. [redacted] scanned U-2 photography covering airfields, military establishments and ports in nearby Arab countries, particularly those receiving Soviet 25X1

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arms and equipment, for signs of possible armed intervention. Activity [ ] continued into the fall, but the complete withdrawal of US troops by late October was quickly followed by the reversion [ ] to a standby status and the return of [ ] to Washington. 463/

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C. Operating Procedures for HTA -- and PIC

The pangs of childbirth through which HTA was passing in the spring and early summer of 1958 resulted in a litter of procedural memorandums. As [ ] assumed the responsibilities of plant manager, he was obviously impressed by the need for establishing agreed-upon procedures for accomplishing the tasks of exploitation and reporting. The growing size of the organization and the division of labor that had taken place since the advent of HTA -- the handling of requirements and monitoring of production by the Support Staff, the utilization of collateral researchers, the development of a mensuration capability apart from the PI branches, the acquisition of editors, and the founding of a separate graphics shop -- created little fiefdoms that had to be bent to the task of getting out photo intelligence.

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First to be issued, on 10 April 1958, were the "Procedures Governing the Establishment, Assignment,

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Progress Reporting and Final Disposition of HTAUTOMAT Projects." 464/ This paper was a significantly revised and coordinated version of the draft submitted by the Support Staff [ ] a few months earlier. 465/ Most of the objections raised by [ ] in his 24 February 1958 memo to [ ] were resolved in [ ] favor. Thus, the procedures provided that the Support Staff would consult with the appropriate branches in evaluating and accepting requirements, that the requirements would be assigned to the responsible PI branch promptly, and that certain steps in the handling and assignment of requirements could be waived. It tacitly left to the branches the ordering of TALENT System photography, the primary source of information for HTA photo interpreters. This memorandum, which emphasized the handling of requirements and projects as distinguished from the preparation of reports, left for a later memo answers to the thorny questions that prompted [ ] to add his 14 suggested steps for preparing manuscripts for PI reports. 466/

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The decisions on the latter points were included in the next memorandum, entitled "Procedures Governing the Preparation and Publication of HTAUTOMAT Photographic Intelligence Reports," issued near the end of May. 467/ This memo placed the responsibility for producing

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photographic intelligence squarely on the shoulders of the PI branch chiefs, though it permitted the delegation of exploitation work and the initiative in matters involving coordination of support to the photo analyst assigned to the project. It sorted out some of the problems involved in the preparation of PI publications by disposing in a summary manner of such relatively simple and highly formatted publications as the ODE, the Brief, the Mission Coverage Summary, and the Informal Report. It then addressed in detail problems and procedures involved in producing PI Memorandums, PI Reports, and Special Reports. These were the ones likely to involve use of much comparative photography, many collateral documents, substantial demands for mensuration support, numerous and complex graphics, considerable text, and trying editorial problems.

The successful coordination of this memo was given a strong assist by the presence of [ ] who was re- 25X1 assigned from the Central Branch, of which he had been chief, to the office of the division chief, where, as special assistant, he immediately began to work closely with [ ] to bring the coordination of this and subsequent 25X1 procedural papers to a speedy and successful conclusion. That conclusion incorporated many of the 14 steps advocated

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but it also provides support elements with

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a strong voice in the planning and shaping up of the manuscript. For better or worse, it gave the graphics shop a powerful hand in the selection of graphics and in the layout of the report, but it involved the editors, as well as graphics personnel, repeatedly in all phases of reporting, from early planning to the final approval of the printed forms. It also introduced a final step, a coordinated examination of approval copies of the printed publication before release for dissemination. The procedures initially called for three approval copies, one for the office of the chief, HTA, one for the office of the chief of the originating branch, and one for the Support Staff, which included the editors. It was not long, however, before the Technical Intelligence Services Branch, which included the graphics shop, was also receiving a copy. Each of the pertinent components, PI branch, editorial section and graphics shop would examine the approval copy for items of particular concern to it and express approval or challenge dissemination of the publication. The final decision as to whether to release the publication or to revise it was up to the office of the chief, HTAUTOMAT.

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The result of the adoption of these procedures was an improvement in the sense of direction and the harmony displayed in the production of HTA publications. Compared with a more straightforward assignment of responsibilities and an insistence on the satisfactory accomplishment of the assigned tasks by supervisors in each component, the price was fairly high. On paper, at least, the production of HTA memorandums, reports, and special reports thereby became a committee job. Fortunately, the procedural paper itself added a "note" authorizing arbitrary departures from the specified procedures on the authority of the chief of the PI branch assigned the project. This escape clause provided a loophole that was used increasingly to avoid excessive coordination on the simpler projects. Even so, the committee approach still remained the recommended one and required considerable effort to follow the complexities of the system, particularly in projects handled by photo interpreters unable to exert firm control to bring the reporting phase of a project to a successful conclusion.\*

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\* In the wake of [ ] unsuccessful attempt to establish that the original Tyura Tam manuscript was not "fit to edit," this procedural paper stated that the "Editorial Section will promptly review all report texts and proof prints to determine (footnote continued on following page)

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Though the aforementioned procedural memo ostensibly established procedures for handling HTA publications, it had no legal standing as a guide for the production of joint PI publications, of which there was an increasing number. As chief of the Military-Scientific Branch, under whose auspices virtually all CIA work on joint projects was accomplished, [ ] had a special concern over the prospect of having to submit to the constraints of the newly formulated rules for handling CIA projects and preparing the resulting manuscripts while the production of joint publications with the military was not subject to comparable rules. [ ] concern was amplified by the assumption of greater responsibility by the military shops in the supervision of joint projects

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(footnote continued from preceding page) suitability to edit." It further required that, in cases where they were not suitable to edit, "particularly if major changes are considered warranted by the assigned editor," the manuscript, accompanied by explanatory comments, be forwarded to [ ] the executive officer, HTAUTOMAT. [ ] instinct for identifying a major problem was excellent, but his solution failed. It was obviously easier to reach some accommodation with those who were ultimately going to have to approve changes in the manuscript anyway than to face the disruptions in working relationships and inevitable retaliations that would result from charges that a manuscript was unfit to edit. The only workable solution to this problem was foreclosed by the failure of the PI branch chiefs, primarily the chief, MSB, to take effective action to ensure that only manuscripts meeting reasonable standards of acceptability for content and presentation be forwarded to the editors.

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for which their photo interpreters were named chairmen.

As [ ] himself summed up the problem in a 7 May 1958

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memo to the attention of [ ] "The whole thing boils

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down to my omnipresent bitch that if we have an HTA

organization functioning for the Agency, Army, Navy, Ops,

ARC, etc. -- with all concerned competing for the use of

HTA personnel and equipment, it is imperative that all

users function under the same rules, regulations, limi-

tations, procedures, priorities -- call it what you

may." 468/ Not only was [ ] concerned about the

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recently issued procedures for producing HTA publications,

he was particularly upset by the independent demands

levied by the military services on HTA support personnel

and facilities without due regard for their effect on the

amount of timeliness of service available for MSB projects.

The third procedural memorandum, issued by HTA on  
3 June 1958, addressed itself to the problem of priorities

and doubtlessly sought, among other objectives, to re-  
spond constructively to [ ] protest. 469/ It dele-

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gated to the Suppprt Staff the authority to set the

priorities and specified the basis for determining them.

It further stated that all work done by HTAUTOMAT personnel

would be scheduled in compliance with the priorities.

The memo then set forth and defined four levels of

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priority, from Priority #1, which took precedence over all other work, to Priority #4, which included non-deadlined projects that were to be done only as time and current workload permitted.

In a closing paragraph having a somewhat philosophical orientation, the procedural memo explained that the priority system was not intended to put supervisors in a straightjacket, rather it was to be used judiciously in planning and directing work assignments. This recurring theme of exceptions with respect to the procedures that were being promulgated was variously interpreted by those affected as either an appreciation of the proposition that no rules would work without loopholes or as evidence that management was not prepared to enforce the rules in cases where supervisors might object strongly to complying with them. In general, those who dealt with the problem of priorities most successfully did so by making every effort to meet deadlines that were inflexible, then trying to complete enough of the remaining work in time to keep most of the customers happy, and avoiding, insofar as possible, never getting the lowest priority projects done.

Appropriately, the last procedural memorandums related to joint requirements and the establishment of

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joint projects on the one hand, and procedures to be followed by photo interpreters in preparing the resulting joint reports on the other. These two memorandums, which constituted an interdependent pair and were issued simultaneously on 15 July 1958, also anticipated establishment of the CIA Photographic Intelligence Center. Both used the name of the future organization and followed it with HTAUTOMAT in parentheses. Moreover, the memorandum on reporting procedures referred to the soon-to-be Data Management Division rather than the rapidly fading Statistical Division, OCR. Both included the US Air Force whenever specific names of the military services were mentioned, and there were four signature lines at the end of each memo, including one for the Military Liaison Officer, USAF. That the USAF was not to be so easily lured into the fold was clear, however, from the fact that the line for the Military Liasison Officer, USAF, was the only one on either memo without a signature.

To provide for the formulation of joint requirements and the establishment of joint projects, one of the procedural memorandums announced the establishment of the Photographic Intelligence Center (HTAUTOMAT) Joint Projects Requirements Committee. 470/ Membership consisted of one representative from the CIA Photographic

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Intelligence Center (HTAUTOMAT), the PIC (HTA) Military Liaison Officer, USA, the PIC (HTA) Military Liaison Officer, USN, and the PIC (HTA) Military Liaison Officer, USAF. [ ] as chairman was responsible for committing PIC (HTA) facilities needed for the accomplishment of the work inherent in the joint projects established by the committee. The CIA (HTA) representative served as secretary for the committee and kept the minutes of each meeting.

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Requirements received by member organizations and judged to be of potential joint interest were registered with the secretary who made them available to representatives of the other organizations. Those of interest to two or more organizations were then discussed by the committee and a consolidated requirement prepared. This was followed by establishment of a joint project and the determination of a suitable priority. Joint projects were assigned by memorandum to the Senior Intelligence Officer (SIO) of the organization selected to chair the project -- usually the one judged to have the primary interest in it. The SIO would then name as project chairman one of his photo interpreters, who would contact representatives of other participating organizations for their designation of members to the PI team. The SIO of

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the organization chairing the joint project was responsible for accomplishment of the work in accordance with the procedures specified in the procedural memorandum on the preparation and publication of joint reports.

The latter memorandum differed from the one issued on 28 May 1958 for the handling of HTA projects only by an adaption of the phrasing to recognize the several participating organizations and the joint nature of the work. Even the "note" to permit arbitrary departures from the details so elaborately spelled out -- this time on the authority of the responsible SIO -- was included. 471/

With the issuance of these two procedural memorandums, joint reporting was formalized and brought under substantially the same controls as other HTA activity. Heretofore, the status of military participants had been somewhat vague and suggested the position of guests, who, though heartily welcomed, were, nevertheless, coequals with their Agency counterparts only with respect to the substance of joint PI publications. Now, with creation of the Joint Projects Requirements Committee and introduction of the concept of the Senior Intelligence Officer, military participants in HTA and PIC would also operate on equal footing with Agency personnel in the planning and supervision of joint photo interpretation work. On the other

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hand, in competition for limited Agency support facilities and manpower, they would be subject to the same constraints as their CIA counterparts. This was bound to reassure [ ] and assuage his fears of delays to CIA-chaired projects because of unbridled demands on HTA support components by the military.

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D. Automated Mensuration -- with Bugs

The spring of 1958 was an exciting one for HTA photogrammetrists because they appeared to be on the threshold of a breakthrough in mensuration. One aspect of this breakthrough was the prospect of measuring in stereo -- i.e., with an instrument that made it possible to view the object being measured in three dimensions, thereby enhancing the probability of obtaining a more accurate measurement. The other was a further step in automating the mensuration process. At this particular point in history, late spring and summer of 1958, the latter was the more promising of the two efforts.

Measuring in stereo was to be accomplished on a Model TA-3 stereocomparator manufactured by the Ottico Meccanica Italiana in Rome (Figure 129). Headed by the former Italian Senator, Umberto Nistri, the company was one of those that [ ] had visited after the VIII

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International Congress of Photogrammetry, two years earlier. [ ] had become enthusiastic about the piece of equipment, then under development, and HTA had put in an order for the first instrument off the production line. It arrived in April 1958, and installation by company technicians was completed during May. 472/

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Familiarly alluded to by HTA personnel as "the Nistri," this instrument provided readout of coordinates for points measured through use of an Olivetti typewriter that produced a paper tape. The tape was then used to feed the data to the ALWAC, which did computations and printed out the measurements on a Flexowriter. The operation of the Nistri was, therefore, not on line with the ALWAC, though the paper tape did eliminate manual recording of the coordinates and keyboarding of the data for entry into the computer.

The seeming simplicity of the foregoing system belied the all but insurmountable problems of operation. The very features that intrigued HTA managers made it a delicate and fussy instrument to use, particularly in the uncontrolled environment of the Steuart Building. An estimated 75% to 95% of all measurements were in error. Obvious errors were annoying and caused loss of valuable time, but subtle ones, not easily detected, were a

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potential source of embarrassment.

As if the malfunctions and need for constant and costly recalibration were not enough, the detrimental effects on the operator were even worse. Difficulties inherent in the manipulation of four different handwheels to orient the photographs so as to get and keep them in proper register for stereoviewing subjected the eyes of the operator to constant abuse, resulting in headaches and fatigue. It thus became necessary to limit duty at the instrument to no more than four hours per day per person -- and there were few persons qualified as operators. 473/

To say that the instrument, which was designed primarily for photogrammetric triangulation in the compilation of maps, was a limited success in the production of photo intelligence would be an overstatement. Yet for a few years it was the only stereocomparator in the NPIC organization and was used in difficult assignments where the stereoviewing feature was deemed desirable to obtain the best possible measurements.

The further automation of the mensuration process that took place in the late spring and early summer of 1958 eliminated the manual recording of readings from the Mann Comparator by a second person, and supplanted

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the use of a desk calculator by the electronic wizardry of the computer. Key elements in the system were the Mann Comparator, a Telecordex, and the ALWAC. The Mann comparator had been previously acquired from the Navy, and modified by the addition of magnetic readout heads. 474/ These heads, one for encoding data on the X-coordinate and another for data on the Y-coordinate, provided inputs for the Telecordex, which produced a paper tape. This tape was then loaded manually on the supervisory control Flexowriter attached to the ALWAC. Readout of the encoded data by this Flexowriter served as the input to the computer, which printed out the desired measurements.\*

The Telecordex, missing link in the system, arrived on 26 May 1958. 475/ Steps to acquire it dated back to July 1957 when  had visited several firms in the Los Angeles area in an attempt to find a means for micron digitation of HTA comparator readout. Among companies visited was the Telecomputing Corporation, where he found the only suitable equipment, including magnetic readout heads and the Telecordex. 476/

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\* To HTA photogrammetrists this constituted automation of the mensuration process, a characterization that was certainly well merited. It is obvious, however, that this did not constitute on-line operation with the computer.

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Use of this equipment promised to speed up the mensuration process and thus add to the computer workload. Moreover, acquisition of photographic coverage of Soviet Central Asia, where available maps were poor and inaccurate, begot requirements that called for attempts by HTA to undertake limited extension of geodetic control and bridging. These, too, taxed the existing computer capability. In choosing the ALWAC, however,  had regarded 25X1 with favor the availability of additional peripheral equipment, and the fact that the capacity of the computer itself could be readily expanded should the need develop. Now it had, and HTA proposed to upgrade the capability of the ALWAC to handle a mass data reduction operation which would use a rather large number of programs.

The upgrading included purchase of a Ferranti high-speed photoelectric paper tape reader and a high-speed tape punch -- operating respectively at 20 and six times the speed of the existing equipment -- a second Flexowriter for off-line transcription of punched tape output, an increase in the memory capacity of the computer by replacing the 4,096-word drum with an 8,192-word drum, and the addition of a pre-select command to permit direct access to any of the individual sets of coordinates stored in the main memory. The latter feature was needed

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particularly in connection with geodetic control extension and bridging, operations that involved the internal storage of large numbers of point coordinates which the program called for in a non-serial manner.

Interchange of the drums and addition of the pre-select command could both be accomplished as field changes on the existing equipment at the loss of from two-to-five weeks of computer down time. The manufacturer proposed however, an exchange of the memory and logic cabinets at a cost of several thousand dollars less than the field change.\* 477/ Since this alternative would also substantially eliminate the down time, it was the course of action chosen. The exchange of cabinets and installation of peripheral equipment were accomplished in May 1958. 479/ This dovetailed nicely with the arrival of the Telecordex in the same month.

The acquisition of the TA-3 stereocomparator, the receipt of the Telecordex -- which set the stage for the first automation of the mensuration process by a photo intelligence organization -- and the upgrading of the

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\* One of the intriguing aspects of the ALWAC Corporation, which was already in financial difficulty and had merged with the El-Tronics Corporation by the time these modifications were proposed, 478/ was the relatively good equipment offered at a very competitive price -- perhaps too low to permit corporate survival.

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ALWAC that contributed to proper functioning of this improved mensuration system once more demonstrated the vanguard position of HTA in the conception of a total system for the exploitation of high-resolution aerial photography, such as that in the TALENT system. It was also another example of the type of planning and procurement that kept rival organizations beating a path to the door of HTA to seek assistance in expanding their own exploitation capability.

The Strategic Air Command, probably the most aggressive and certainly the best financed among those pursuing the task of upgrading their exploitation capability, was one of those rivals that sought to benefit from the HTA research-and-development effort. In October 1957, at the urgent request of [redacted] an HTA team consisting of Lundahl, [redacted] had traveled to Offutt Air Force Base at Omaha, Nebraska, to present to SAC personnel the HTA systems concept for the exploitation of aerial photography. The request for this briefing resulted from enthusiastic reports brought back to Offutt by SAC personnel who had visited the Steuart Building, where they had been exposed to HTA research-and-development concepts and some of the equipment already procured. 480/

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As a result of the series of October 1957 briefings at Offutt, eight SAC photo interpreters and photogrammetrists came to HTA for the month of May 1958 for indoctrination in the operation of photo lab and mensuration equipment, including the ALWAC. 481/ Unfortunately, they could scarcely have chosen a worse time to learn about the new mensuration equipment. The Nistri stereocomparator had just arrived and was being installed. The Telecordex didn't arrive until just before they departed. And, though the ALWAC had already been functioning for several months, it was in May 1958 that the exchange of the memory and logic cabinets and other modifications took place.

The two persons assigned to the photo lab, which was unaffected by the absence or arrival of new equipment, accomplished their goals. The others were not so lucky.

[ ] the ranking member of the group, observed that the SAC personnel had learned much but added they would like to return after a few months when the functioning of the new equipment had stabilized. [ ] 25X1

said that installation of the ALWAC that SAC had ordered was scheduled to be completed on 5 June, and that he and

[ ] would like to return later in the summer with a list of specific questions.\* He also 25X1

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\* [ ] proved (footnote continued on next page) 25X1

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expressed particular interest in learning more about the operation of the new mensuration equipment. 483/ In spite of this enthusiastic proposal, there was, however, no reprise.

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(footnote continued from preceding page) to be an unforgettable character. He left a legacy of stories that were subjects of conversation years after he departed. One recounted how he and a couple of other master sergeants pulled into town, rented an apartment, proceeded to Bolling AFB where they conned the NCO Wives Club into providing them with pots, pans, and furniture and then went out and bought a television with the intent to default immediately on the payment. 482/

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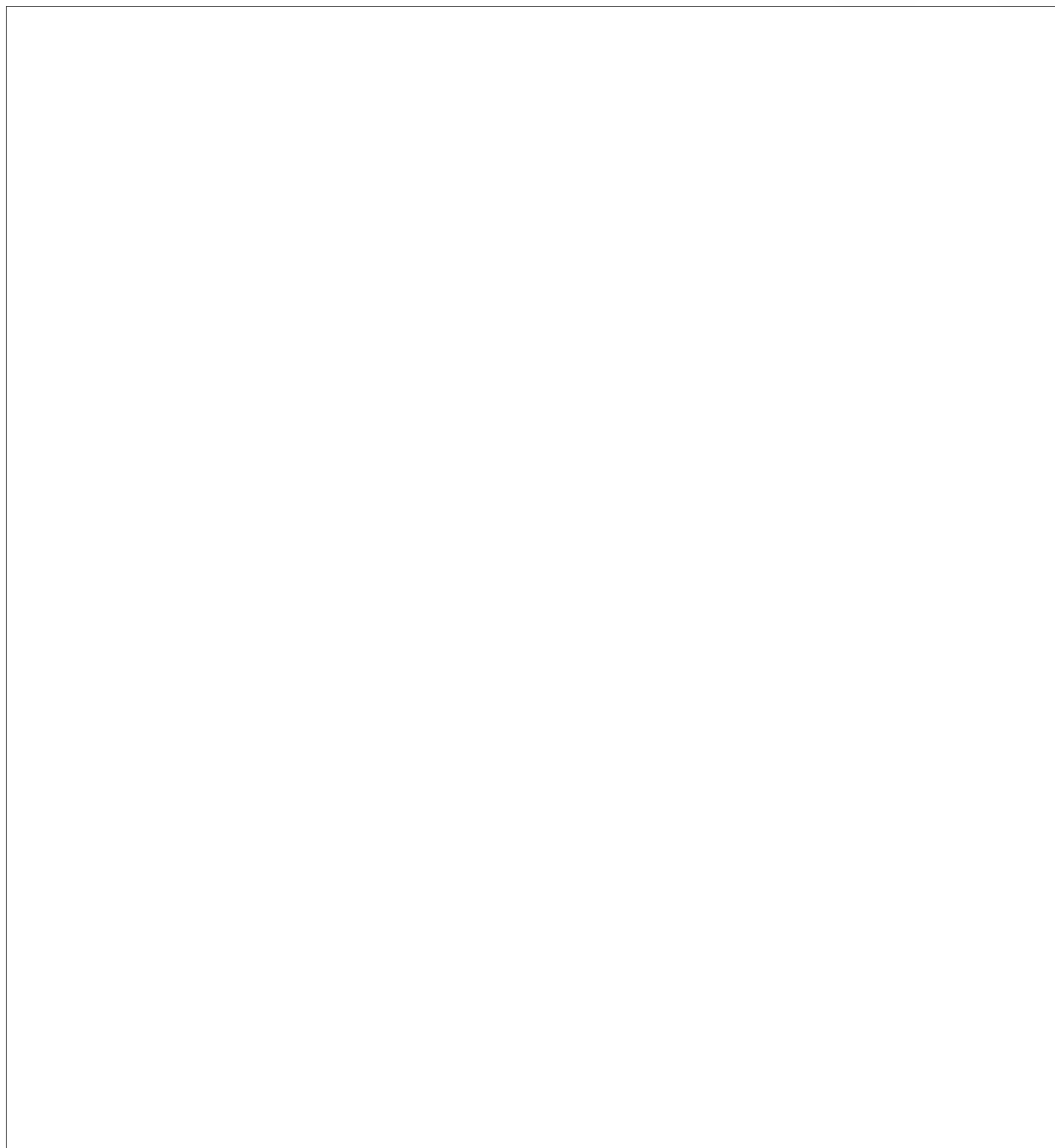
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F. A Center at Last

On 18 August 1958 the CIA Photographic Intelligence Center was finally established under the DDI. Arthur C. Lundahl was named director,  was

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appointed deputy director, and [ ] was designated executive officer. At the same time, the Photo Intelligence Division, ORR, and the Statistical Branch [sic], OCR, were abolished. 491/ At last the long period of waiting was over. The organization for exploiting U-2 photography, which had been prematurely proposed as the Office of Statistical Research in December 1955, had finally achieved Office status.

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Though the organization thus created was almost identical with the one contemplated in Lundahl's 7 March 1958 memo to Amory, the grade structure was another matter.\* The table of organization approved by the DDS,

[ ] on 31 July 1958 omitted all grades. [ ] requested that Lundahl and [ ] the Director of Personnel, discuss the proposed grade structure and report to him on or about 1 September. 492/

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The reason for withholding approval of the grades stemmed from the failure of [ ] Director of Personnel, to concur in the proposed grade structure for the new center. In his memo to [ ] in which he

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\* Minor alterations in the proposed organization included a change in title from "Security Office" to "Security Staff," elimination of a "Courier Section" in the Technical Branch of the Data Management Division, and several minor changes in job titles.

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challenged the grades, [ ] made three major points. 25X1  
First, he denied approval of GS-15 grades for the positions of division chief. Second, he maintained that the center did not, as yet, have sufficiently experienced personnel to justify such positions for division chiefs or many key positions below that level. Third, he urged recruitment from the outside rather than what he characterized as hasty promotion from within to fill some of these key positions. 493/ Obviously, these were substantial matters and required some extended study and negotiations before the conflicting claims could be resolved. The grade structure would certainly be an early and important piece of business for the director of the newly established center and his executive officer.

Apart from the small cloud caused by the unresolved question of grades, there was much room for optimism over the prospects for the new organization. Much as it resembled the earlier HTAUTOMAT, there were significant differences, particularly when viewed in the perspective of future growth and development. No longer was there a question about the survival of the organization. Barring termination of the U-2 collection program and disastrous failure in the development of follow-on systems, photo interpretation in CIA in support of national intelligence objectives was here to stay.

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As far as relations with other components in CIA and the Intelligence Community were concerned, establishment of PIC was a boon. No longer would functioning through channels require dealing with [ ] and Guthe to reach the DDI -- at least in cases where courtesy and circumstances seemed to demand it. Ever since the creation of HTA, continued subordination of D/GP to the Geographic Research Area and ORR had seemed anachronistic, particularly since much of the activity in HTAUTOMAT transcended the purview of these two components. The advantages of Office status were even greater with respect to rapidly expanding contacts between HTA/PIC and other organizations in the Intelligence Community. Not only did the creation of PIC provide considerably greater prestige, it also afforded more direct channels of communication and enhanced the rapidly developing national posture of the organization.

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As the new center faced the future, the elimination of several past problems was offset, to some extent, by the survival of others that promised to grow. Most immediate among the latter was the need for some solution to the controversial question of how to staff and organize for the production of photo intelligence reports. The cumbersome procedures hammered out and approved in the

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spring of 1958 could scarcely eliminate the need for imaginative action to harness the editors and graphics personnel into a team for the smooth and effective publication of photo intelligence.

The perpetuation of two PI divisions in the new organization was of doubtful wisdom, but need for a tough decision on this matter was less urgent. Nevertheless, the dramatic successes of photo interpreters in the Military-Scientific Division stood in ever sharper contrast to the World War II-type accomplishments of the Industrial-Geographic Division. Moreover, the thrust of the work in the Military-Scientific Division was inexorably staking out the territory that the new PIC would inevitably claim as its domain. By now it was reasonably clear that it was in this area of highest-priority military and scientific targets that the real future of the organization lay. If neither the sheer ennui of "documenting" endless industrial plants or rail yards nor an open revolt of disadvantaged IGD photo interpreters precipitated a crisis, if flaps like the one over the coastal defense site on the Hel Peninsula didn't embarrass PIC into further action, some day a critical need to marshal all available PI manpower to fill requirements for photo intelligence on missile, nuclear, and BW/CW

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targets promised to bring all PIC photo interpreters into one division, under one management to pursue work on photography covering these types of installations.

In the summer of 1958 there were also faint stirrings of further problems in the management of the R&D effort. Until now, DDP/TSS had provided much support and some funding in the development and in the procurement of equipment for HTA. Now, with the achievement of Office status and with the need to develop much more sophisticated exploitation and data handling equipment for even more exotic inputs from collection systems already under development, PIC was thinking in terms of a more self-contained R&D effort. Such a course of action not only promised to be less confining and more responsive to PIC, it also offered a better opportunity to keep the equipment purchased or developed under control of those who would use it. That Lundahl was cognizant of the danger that PIC might even lose ground in the competition to control this effort, which would be of critical importance in determining the future exploitation capability of the center, was suggested in a memo to Bissell in which he stated, apropos of the oncoming W117L system, ". . . there may be need of some discussion and agreement as to just what role or authority TSS might have in accepting,

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monitoring, and approving contracts related to Photographic Data Extraction Systems and particularly information handling as a corollary of internal management of HTA [sic]. I am sure that this can be worked out with TSS representatives but I must state that I would be reluctant to accept any plan whereby my highly qualified R&D specialists in photographic intelligence, and in day to day working contact with the problems and achievements at HTA, would be eliminated from contacts with industrial representatives and the right to participate in preparation of requirements and the review and acceptance of proposals." 494/

Concern over R&D matters was a very real problem for the new center, particularly in view of the prospect of future large inputs of photography that was certain, in the long run, also to improve in resolution. It was, however, also certain to lead the center into dangerous waters. Research and development were bound to be expensive and, at times, disappointing. They were, moreover, not central to the job of PIC, which was the exploitation of photography. It could easily become a case of being damned if you do and damned if you don't. Whatever the risk, HTAUTOMAT and the new center were showing signs of wanting to try it.

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Lest it seem that emerging long-range problems, so easy to identify with the benefit of hindsight, cast a pall over PIC when the mood should have been one of rejoicing, assurance should be given that this was not the case. Even the near-term problem of grades could be regarded philosophically. There was no great problem of headroom in the new center. The newly named but familiar Director and his people stood high in the esteem of senior managers in the Agency and among leaders elsewhere in the Intelligence Community, as well as in key sectors of the scientific and industrial world. They had finally achieved the organizational status they sought and which they felt confident would provide the opportunity they required to attain even higher levels of achievement. With further development of the capabilities of those in the center and a continuation of the dedicated and imaginative work that had become the hallmark of the organization, the rest should take care of itself. It would not be unrealistic to suppose that, on 18 August 1958, from where Lundahl sat "he looked at what he and his people had wrought and pronounced it good."

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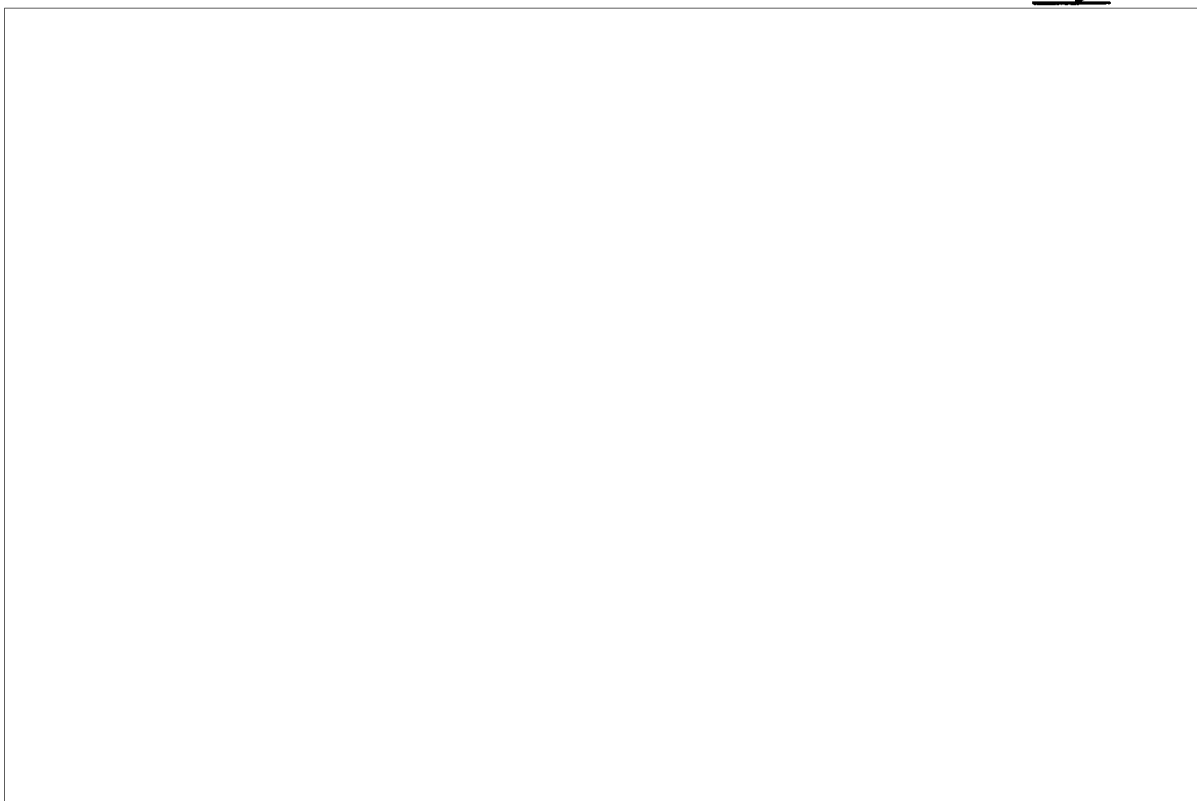
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Appendix B

Chronology: 1956 - 1958

1956

9 Jul	HTA initiates operations in the Steuart Building.
10 Jul	Date of the last Russian penetration missions before the initial stand-down.
2 Aug	Lundahl returns to duty in Washington after attending the VIII International Congress of Photogrammetry, Stockholm, Sweden.
29 Aug	First U-2 mission over the Middle East.
7 Sep	Reber and Lundahl deliver first U-2 photography to the British.
7 Sep	HTA issues a PI Alert on the Mozhaysk installation.

25X1

12 Sep	Intelligence Advisory Committee creates the PARAMOUNT Committee.
13 Sep	First Middle East mission flown from new base at Adana, Turkey.
29 Oct	Outbreak of hostilities in Middle East.
7 Nov	Ceasefire in Middle East.

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1956 (cont.)

13 Nov	Intelligence Advisory Committee deactivates the PARAMOUNT Committee.	
19 Nov	Decision to establish an overseas PI center on the base [redacted]	25X1
4 Dec	Date of Mission B-1344; photography first processed and exploited [redacted]	25X1
12 Dec	Date of issue of the first of two HTA publications on special weapons storage and loading facilities at Soviet long-range airfields.	

1957

29 Jan	[redacted] depart Washington, D.C., for Eglin AFB, Florida, for tests on the Project OSTIARY camera system.	25X1
1 Feb	Lundahl calls for a revision of the mission and functions and a reorganization of HTA.	
7 Mar	Consultant meeting at Headquarters on the [redacted] problem.	25X1
3 Apr	[redacted] leave on first extended on-site trip to US missile and nuclear installations.	25X1
15 Jul	HTA graphics shop begins operation.	
25 Jul	HTA recommends use of A-2 camera for SOFT TOUCH missions.	
26 Jul	[redacted] announces completion of reassignment of HTA personnel in connection with the organizational realignment.	25X1
5 Aug	First of the SOFT TOUCH missions flown from Pakistan.	
8 Aug	Reduction of 20 positions announced -- 12 in the ORR division and eight in OCR branch.	

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1957 (cont.)

Aug	Joint Army-Navy-CIA-Air Force first-phase exploitation of photography initiated at HTA.	
17 Sep	ALWAC III-E computer delivered to Steuart Building.	
23 Sep	Project JAM SESSION instituted at HTA.	
30 Sep	[redacted] relieved of his duties as chief of the former Special Projects Branch.	25X1
8- 9 Oct	Consultations at HTA on the gaseous diffusion plant, [redacted]	25X1
22- 23 Oct	Consultations at HTA on the reactor area and the chemical separation plant under construction, [redacted]	25X1
4 Nov	GMIC Special Engineering Analysis Group starts work at HTA.	
15 Nov	OCR designates the Statistical Branch, SR, the Statistical Division, OCR.	
16 Nov	Lundahl and Gardner depart for [redacted] to give briefings on information from SOFT TOUCH missions.	25X1
27 Nov	Report on findings of the GMIC Special Engineering Analysis Group published by HTA.	
2- 5 Dec	GMIC Scientific Advisory Panel meeting at HTA.	
2 Dec	Allen Dulles makes first and only visit to HTA.	
2 Dec	[redacted]	25X1
13- 14 Dec	[redacted]	25X1

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1957 (cont.)

- 16 Dec Lundahl briefs Vice President Nixon on a wide range of U-2 photography in the DCI conference room.
- 23 Dec Lundahl briefs Kelly Johnson, designer of U-2, on some of the photographic accomplishments of the U-2 collection system.

1958

- 3 Jan Announcement of DCI approval for an increase of 35 slots in the combined ORR-OCR HTAUTOMAT Table of Organization.
- 31 Jan Military-Scientific and Operations Support Branches exchange work areas, with MSB moving to the seventh floor and OSB to the sixth.
- Feb Minicard equipment finally arrives at HTA.

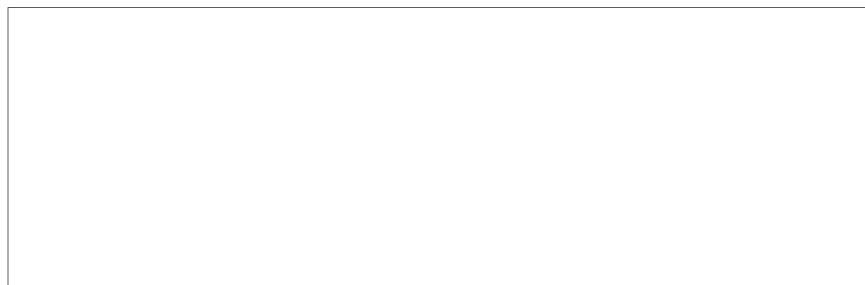
24-  
25 Feb



25X1

- 7 Mar Proposal to create the CIA Photographic Intelligence Center forwarded to DDI.

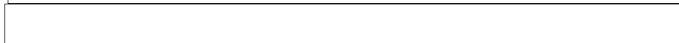
14 Mar



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16 Mar

Mar

 depart  
for Clark AFB, Philippine Islands, to  
establish a film processing and interpretation center for U-2 missions over Indonesia.

25X1

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1958 (cont.)

10 Apr	First of several procedural memos issued for use in guiding internal HTA operations.	
Apr	Model TA-3 stereocomparator (the "Nistri") delivered to HTA.	
May	Capability of the ALWAC III-E upgraded.	
26 May	Telecordex delivered to HTA.	
2- 3 Jun	Consultations at HTA on the Soviet heavy water plants <span style="border: 1px solid black; display: inline-block; width: 200px; height: 1.2em; vertical-align: middle;"></span>	25X1
9- 13 Jun	Consultations at HTA on Soviet uranium mining and milling sites.	
16 Jun		25X1
22 Jun		
11 Jul		
18 Aug	Establishment of the CIA Photographic Intelligence Center announced.	

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Appendix C

Source References\*

1. Monthly Report of the Industrial Branch, Jul 56,  
p. 1. TS CODEWORD.\*\*  
OCR/SR/SB Status Report, 29 Aug 57, p. 4, [ ] 25X1  
TS CODEWORD.
2. DDS, Office of Personnel. Notification of Personnel  
Action, 12 Aug 56. U.
3. DGP/SPB Distribution Total Man Hours, Aug 56. No  
classification.
4. Memo, [ ] for Lundahl, 15 Aug 56, sub: Special 25X1  
Projects Branch Production Schedule. TS.
5. Monthly Reports of the Geographic Branch, Jul 56,  
p. 1, and Aug 56, p. 2. S CODEWORD CIA IUO.  
Also see reference 3, above.
6. Monthly Report of the Industrial Branch, Aug 56,  
p. 4. S CODEWORD.
7. Monthly Reports of the Technical Intelligence Branch,  
Aug 56-May 57.
8. Monthly Reports of the Support Staff, Jul 56, p. 1,  
and Sep 56, p. 2. S CODEWORD.
9. Monthly Report of the Support Staff, Sep 56, p. 2.  
S CODEWORD.
10. Office of Personnel, "Photo Intelligence Division,"  
16 Nov 56, p. 91. Office of Personnel, "Photo In-  
telligence Division," 27 Nov 56, n.p. Photo Intel-  
ligence Division, "Unofficial T/O with Personnel  
Assignments," 15 Aug 57.

\* Unless otherwise indicated, all source references are  
in the NPIC Historical Collection housed in the NPIC Library.

\*\* Unless otherwise indicated, all source references are  
classified SECRET.

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SECRET



## SECRET

11. Office of Personnel, "Photo Intelligence Division,"  
27 Nov 56, n.p.
12. *Ibid.*
13. Memo, [ ] 2 Dec 55, sub: Establishment of the Office of Statistical Research, [ ] TS. 25X1 25X1
14. OCR/SR/SB Status Reports, 29 Aug 57, p. 4, [ ] TS CODEWORD. 25X1
15. SB/IS, *General Information and Procedures Manual*,  
Jan 57, Tab B.
16. See reference 14, above, p. 8.
17. Monthly Reports of Technical Intelligence Branch,  
Aug 56, pp. 1, TS CODEWORD, and 4, S; Sep 56, pp. 1,  
TS CODEWORD, and 4, S; Nov 56, pp. 1, TS CODEWORD,  
and 4, S; Dec 56, p. 4, S; Jan 57, pp. 2, S CODE-  
WORD, and 5, S; June 57, p. 5, S; Jul 57, p. 4, TS  
CODEWORD.
18. Monthly Reports of the Special Projects Branch,  
Aug 56, p. 2, CIA IUO; Sep 56, p. 1, S CODEWORD;  
Oct 56, p. 2, TS CODEWORD; Nov 56, p. 1, S CODEWORD;  
Dec 56, p. 1, No classification; Feb 57, p. 1, TS  
CODEWORD; Mar 57, p. 1; Apr 57, p. 1; May 57, p. 1.
19. OCR/SB, "Reference, Reproduction, and Dissemination  
Service," Jun 57.
20. Memo, [ ] 5 Mar 57, sub: February Status Report for Statistical Branch, Annex B. 25X1
21. Memo, [ ] 1 Oct 56, sub: Status Report for the Statistical Branch, SR/CR (Activities Since the Move to the Steuart Building), p. 7. 25X1  
Memo, (No signature line) for [ ] 7 Jan 57, sub: Status Report for the Statistical Branch SR/CR, Annex B. 25X1
22. Memo, (No signature line) for [ ] 7 Jan 57, sub: Status Report for the Statistical Branch SR/CR, Annex B. 25X1
23. Memo, [ ] 30 Jul 56, sub: Overtime of Pay Period 15-28 Jul 56. 25X1

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24. Committee on Requirements, Project AQUATONE.  
Western USSR: Highest Priority Targets, 31 Jul  
56, p. 1, [ ] TS. 25X1  
Committee on Requirements, Project AQUATONE.  
Far East: Highest Priority Targets, 31 Jul 56,  
p. 1, [ ] TS. 25X1
25. CIA/OSA, *Collection Handbook*, n.d., p. 10, [ ] 25X1  
[ ] TS CODEWORD. 25X1
26. See reference 25, above.
27. *Ibid.*
28. [ ] "Moscow Charges U.S. Air In- 25X1  
cursions by Military Craft," *New York Times*, 11 Jul  
56, pp. 1, 3. U.  
"Soviet in U.N. Move on U.S. 'Intrusions'," *New York  
Times*, 13 Jul 56, p. 5. U.  
Edwin L. Dale, Jr. "Soviet Air Charge is Rejected  
by U.S.," *New York Times*, 20 Jul 56, p. 1. U.
29. CIA/NPIC Mission Folder, A 2013, 4 Jul 56, filed in  
Production Services Group, NPIC. TS CODEWORD.
30. Interview, Dino Brugioni with author, 20 Aug 71, p. 6.  
TS CODEWORD.
31. CIA/NPIC Mission Folder, A 2014, 5 Jul 56, filed in  
Production Services Group, NPIC. TS CODEWORD.
32. See reference 30, above, pp. 3, 4.
33. CIA/NPIC Mission Folder, A 2024, 10 Jul 56, filed in  
Production Services Group, NPIC. TS CODEWORD.
34. See reference 30, above, p. 7.
35. Monthly Reports of the Special Projects Branch, Jul  
56, No classification, and Aug 56, CIA IUO.
36. See reference 30, above, p. 7.
37. CIA/HTA Mozhaysk Folder No. 2, "Mozhaysk Chronology,"  
n.d., p. 1. TS CODEWORD.
38. See reference 30, above, pp. 1, 2.

SECRET

## SECRET

39. CIA/HTA, B-1-56, 8 Aug 56, "Moscow/Fili Airframe Plant No. 23." TS CODEWORD.
40. CIA/HTA, B-2-56, 22 Aug 56, "Sudomekh Shipyard, 196." TS CODEWORD.  
CIA/HTA, B-3-56, 22 Aug 56, "Baltic Shipyard." TS CODEWORD.  
CIA/HTA, B-4-56, 23 Aug 56, "Marti Shipyard, 194." TS CODEWORD.  
CIA/HTA, B-5-56, 23 Aug 56, "Kronshtadt Naval Shipyard." TS CODEWORD.  
CIA/HTA, B-6-56, 24 Aug 56, "Zhdanov Shipyard, 190." TS CODEWORD.
41. CIA/HTA, B-11-56, 28 Aug 56, "No Evidence of SAM Herringbone Sites in Leningrad, Riga, and Kalinin-grad Areas." TS CODEWORD.
42. Monthly Report of the Geographic Branch, Aug 56, p. 1. TS CODEWORD.
43. See reference 37, above, pp. 1, 2.
44. HTA/TIB Distribution Total Man Hours, Aug 56.
45. Monthly Report of the Technical Intelligence Branch, Aug 56, p. 1. TS CODEWORD.
46. Interview, [ ] with author, 22 Jul 71, pp. 10, 11. TS CODEWORD. 25X1
47. See reference 45, above.
48. See reference 9, above, p. 1.
49. See reference 42, above.
50. Monthly Report of Support Staff, Jul 56, p. 1. S CODEWORD.
51. Memo, [ ], 1 Oct 56, sub: Status Report for the Statistical Branch, SR/CR (Activities Since the Move to the Steuart Building), p. 3. 25X1
52. *Ibid.*, p. 2.
53. See reference 13, above, p. 13.

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- 54. See reference 14, above, p. 11.
- 55. See reference 51, above, p. 7.
- 56. See reference 51, above, p. 2.
- 57. See reference 51, above, p. 7.
- 58. See reference 51, above, p. 1.
- 59. HTA/CR Steuart Building Messenger and Courier Service,  
16 Jul 56, p. 1.
- 60. ORR/GP, GP/I-212, 31 Aug 56, Aircraft Shipping Crates  
on Chu-Hsien [sic] Airfield. S NOFORN Continued Con-  
trol.
- 61. ORR/GP, GP/I-209, 21 Aug 56, PEGMATITE.
- 62. ORR/GP, GPI-205, 14 Aug 56, Amateur Photography from  
Commercial Aircraft.
- 63. Monthly Report of the Photo Intelligence Division,  
Aug 56, p. 2.
- 64.
- 65.
- 66. *Ibid.*  
See reference 64, above.
- 67. Interview, Arthur C. Lundahl with author, 12 Nov 70,  
pp. 23-24. TS CODEWORD.
- 68. See reference 64, above, p. 4.
- 69. See reference 64, above, p. 14.
- 70. See reference 65, above, p. 13.
- 71. See reference 65, above, pp. 15, 16.

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72. See reference 46, above, pp. 7, 8.
73. See reference 46, above, p. 4.
74. See reference 65, above, pp. 10-12.
75. See reference 65, above, pp. 5-9.
76. See reference 64, above, pp. 10-14.
77. Arthur C. Lundahl. *General Considerations and Suggested Idealizations of a U.S. Photographic Intelligence System*, 21 May 54.
78. Interview, Arthur C. Lundahl with author, 19 Nov 70, pp. 3-5. TS.
79. "Egypt Nationalizes Suez Canal Company; Will Use Revenues to Build Aswan Dam," *New York Times*, 27 Jul 56, p. 1. U.
80. CIA/HTA HTAUTOMAT, *Middle East: Book 1*, Jan 57. TS CODEWORD. Official copy available in Records Center.
81. CIA/NPIC Mission Folder, A 1104, 29 Aug 56, filed in Production Services Group, NPIC. TS CODEWORD.  
CIA/NPIC Mission Folder, A 1105, 29 Aug 56, filed in Production Services Group, NPIC. TS CODEWORD.
82. CIA/NPIC Mission Folder, A 1106, 30 Aug 56, filed in Production Services Group, NPIC. TS CODEWORD.  
CIA/NPIC Mission Folder, A 1107, 30 Aug 56, filed in Production Services Group, NPIC. TS CODEWORD.
83. *New York Times*, 30 Oct 56, p. 1. U.
84. *New York Times*, 7 Nov 56, pp. 33ff. U.
85. See reference 80, above.
86. CIA/HTA HTAUTOMAT: *Statistics*, Jan 57, BG68-57. TS CODEWORD. Official copy filed in Records Center.
87. *Ibid.*
88. See reference 78, above, p. 12. TS CODEWORD.

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89. Monthly Report of the Special Projects Branch, Sep 56, p. 2.
90. See reference 78, above, p. 11. TS CODEWORD.
91.  25X1
92. See reference 78, above, pp. 11ff.
93. See reference 78, above, p. 13.
94. Memo,  for Director of Intelligence, US Air Force, 18 Jan 57, sub: Policy and Procedures for Overseas Handling, Processing, and Reporting on Photographic Results of AQUATONE Operations, TCS-734-57, and attachment,  same title. TS. 25X1
95. See reference 89, above, p. 2.
96. See reference 51, above, p. 7.
97. Memo, , 4 Dec 56, sub: Progress Report, p. 2. S CODEWORD EYES ONLY. 25X1
98. Monthly Report of the Special Projects Branch, Nov 56, p. 2. S CODEWORD.  
Monthly Report of the Industrial Branch, Nov 56, p. 2. TS CODEWORD.  
Monthly Reports of the Geographic Branch, Oct 56, p. 2, No classification, and Nov 56, p. 2. S CODEWORD.
99. Memo,  3 Nov 56, sub: Status Report for the Statistical Branch/SR, for Oct 56. 25X1
100. Letter,  24 Nov 56. U. 25X1  
Letter,  for Lundahl and  23 Nov 56. U. 25X1  
Letter,  24 Nov 56. U. 25X1
101. Interview,  with author, 30 Oct 69, pp. 5, 6. TS. 25X1
102. *Ibid.*
103. See reference 86, above, BG68-57, BG69-57.

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104. ORR/GP/SPB Monthly Time Distribution Record, Sep 56. No classification.  
 ORR/GP/SPB Monthly Time Distribution Record, Oct 56, p. 3. No classification.  
 ORR/GP/SPB Monthly Time Distribution Record, Nov 56, p. 5.
105. Monthly Report of the Geographic Branch, Oct 56, p. 2. No classification.
106. Monthly Report of the Geographic Branch, Nov 56, p. 2. S CODEWORD CIA IUO.
107. Monthly Reports of the Industrial Branch, Oct and Nov 56, p. 1. TS CODEWORD.
108. See reference 91, above.
109. *Ibid.*
110.  25X1
111. See reference 78, above, p. 9.
112. See reference 91, above, p. 2.
113. CIA/HTA I-A3, 7 Sep 56, Possible Nuclear Reactors Under Construction. TS CODEWORD.
114. CIA/HTA I-A6, 21 Sep 56, Probably Missile Site and/or Test Installation. TS CODEWORD.
115. Memo,  for Lundahl, 16 Feb 56, sub: Conference with Members of DDP on Camera Capabilities. 25X1
116. ORR/GP GP/I-159, 29 Feb 56, Camera Recommendations.
117. Memo,  for Lundahl, 30 Mar 56, sub: Trip to Fairchild Camera and Instrument Corporation, Long Island, N.Y., 27 Mar 56. 25X1
118. Memo,  for Lundahl, 11 Jun 56, sub: Report of Accomplishments During Trip to Long Island, N.Y., and Los Angeles, Cal. S EYES ONLY. 25X1  
 Memo,  21 Sep 56, sub: Travel to Urbana, Ohio. 25X1

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119. Memo, [ ] 12 Oct 56, sub: Accomplishments at Syosset, Long Island, Contractor's Plant. S EYES ONLY. 25X1
- Memo, [ ] 31 Oct 56, sub: Report on Trip to New York to Inspect Photographic Equipment during Acceptance Tests. 25X1
120. Memo, [ ] 6 Dec 56, sub: Report on Trip to Air Proving Ground, Eglin AFB, Florida. S EYES ONLY. 25X1
121. Memo, Lundahl [ ] 27 Sep 56, sub: Technical Intelligence Branch's Computational Requirements. 25X1
- Memo, [ ] for Bissell, 25 Sep 56, sub: Observations Concerning Possible Solutions to Extensive Computational Requirements. 25X1
122. Memo, [ ] for Bissell, 25 Sep 56, sub: Observations Concerning Possible Solutions to Extensive Computational Requirements. 25X1
123. *Ibid.*
124. Interview, [ ] with author, 20 Jul 71, p. 3. TS CODEWORD. 25X1
125. Monthly Reports of the Technical Intelligence Branch, Oct 56, p. 2; Nov 56, p. 2; Dec 56, p. 2. TS CODEWORD.
126. See reference 124, above.
127. Memo, [ ] for Chief ST/A/RR, 1 Nov 56, sub: Request for Photo Intelligence Training. 25X1
128. Monthly Report of the Special Projects Branch, Nov 56, p. 2. S CODEWORD.  
Monthly Report of the Geographic Branch, Nov 56, p. 2. S CODEWORD CIA IUO.
129. Monthly Report of the Photo Intelligence Division, Oct 56, p. 2.
130. Monthly Report of the Photo Intelligence Division, Dec 56, p. 2.

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131. [ ] NPIC Field Operations (First draft). TS Working Paper. 25X1
132. Letter, [ ] for Lundahl, 8 Feb 57. U. 25X1
133. See reference 131, above.
134. Letter, [ ] for Lundahl, 29 Jan 57. TS. 25X1
135. CIA/NPIC Mission Folder, B 4016, 20 Nov 56, filed in Production Services Group, NPIC. TS CODEWORD.
136. CIA/HTA R3-57, 16 Sep 57, *Ammunition or Unidentified Storage Installations in the Soviet Bloc Having Maximum Security and Blast Protection*, p. 9. TS CODEWORD.
137. Interview, [ ] with author, 27 Jul 71, p. 6. 25X1  
TS CODEWORD.  
Monthly Report of the Special Projects Branch, Dec 56, p. 1. No classification.
138. See reference 136, above, pp. 6, 8.
139. Monthly Report of the Special Projects Branch, Dec 56, p. 1. No classification.
140. *Ibid.*
141. HTA/SPB Monthly Time Distribution Report, Dec 56, No classification; Jan 57, No classification; Feb 57, TS CODEWORD; and Mar 57.
142. CIA/HTA M 10-56, 12 Dec 56, Probable Special Weapons Storage and Loading Installation. TS CODEWORD.
143. CIA/HTA M 1-57, 28 Feb 57, Special Weapons Loading and Storage Installations (Stryy Type). TS CODEWORD.
144. CIA/HTA R1-57, Jan 57, *Unidentified Soviet Construction Project Near Mozhaysk, USSR*. TS CODEWORD.
145. See reference 37, above, p. 3.
146. Memo, [ ] for Members of the Utilization Advisory Board, 18 Jan 57, sub: Outside Consultation on HTAUTOMAT Problems. S CODEWORD. 25X1

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147. Mozhaysk Folder No. 2, "Mozhaysk Chronology," n.d., p. 4. TS CODEWORD.  
Mozhaysk Folder No. 1, "RADM Rickover's Comments Concerning the Unidentified Installation at Mozhaysk." TS CODEWORD.  
Summary of Mozhaysk Briefing for [ ] 25X1  
UCRL, 15 Jan 57. TS CODEWORD.  
Notes from Briefing of Dr. Edward Teller and Dr. Mark Miles by USAF Collection Division Team, n.d. TS CODEWORD.  
Notes from Briefing of [ ] by USAF Collection Division Team, n.d. TS CODEWORD. 25X1  
Notes from Briefing of Dr. Werner von Braun by Members of the Special Developments Branch, n.d. TS CODEWORD.  
Memo, [ ] for TALENT Control Officer, CIA, sub: Comments of [ ] 25X1  
on the Mozhaysk Site, 12 Feb 57. TS CODEWORD. 25X1
148. See reference 37, above, p. 4.
149. *CIA/HTA Consultants Handbook: Unidentified Construction Project Near Mozhaysk, USSR.* TS.
150. See reference 144, above.
151. Monthly Report of the Industrial Branch, Jan 57, p. 1. TS CODEWORD CIA IUO.
152. Monthly Report of the Technical Intelligence Branch, Jan 57, p. 1. S CODEWORD.
153. *GMIC-JAEIC Joint GMIC/JAEIC Preliminary Assessment of the Mozhaysk Site, 29 Jan 57, [ ]* TS 25X1  
CODEWORD.
154. *Ibid.*
155. Mozhaysk Folder No. 2, "Wintertime Coverage of the Mozhaysk Construction Complex," 24 Jan 57, [ ] 25X1  
[ ] TS CODEWORD. 25X1
156. *Ibid.*
157. Memo, [ ] for (list of prospective consultants), sub: Conference of 7 Mar 57. 25X1
158. Memo, [ ] for Bissell. sub: Conclusions of Consultant Panel, 12 Mar 57, [ ] TS CODEWORD. 25X1  
25X1

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159. Agenda for Consultant Meeting in DCI Conference Room, 7 Mar 57.
160. Interview, Arthur C. Lundahl with author, 16 Nov 71, pp. 7, 8. TS CODEWORD.
161. Interview, [ ] with author, Jul 71. (No written record.) 25X1
162. Memo, [ ] for Chairman, Intelligence Advisory Committee, sub: Consultant Panel Meeting, 22 Mar 57, [ ] TS CODEWORD. 25X1
163. Memo for the Record, 10 Feb 59, sub: Report by [ ] on the Functions of the Installations at Malaya Sazanka, Mozhaysk, Valday, Ugolnye Kopi and Olenya. TS CODEWORD. 25X1
164. See reference 118, 119, 120, above.
165. Memo, Guthe for Chief, Psychological and Paramilitary Staff/DDP, 17 Jan 57, sub: Participation in Project [ ] 25X1
166. Memo, [ ], O/Ch/G, 4 Feb 57, sub: Expenses and Itinerary of Trip to Eglin Field, Florida. 25X1
- Memo, [ ], O/Ch/G, 4 Feb 57, sub: Expenses and Itinerary of Trip to Eglin AFB, Florida. 25X1
- Memo, [ ], O/Ch/G, 18 Feb 57, sub: Expenses and Itinerary of Trip to Eglin AFB, Florida. 25X1
- Memo, [ ], O/Ch/G, 18 Feb 57, sub: Expenses and Itinerary of Trip to Eglin AFB, Florida. 25X1
- Memo, [ ], O/Ch/G, 19 Feb 57, sub: Expenses and Itinerary of Trip to Eglin AFB, Florida. 25X1
- Memo, [ ], O/Ch/G, 11 Mar 57, sub: Expenses and Itinerary of Trip to Eglin AFB, Florida. 25X1
- Memo, [ ], O/Ch/G, 11 Mar 57, sub: Expenses and Itinerary of Trip to Eglin, AFB. 25X1
- Memo, [ ], O/Ch/G, 12 Mar 57, sub: Expenses and Itinerary of Trip to Eglin AFB, Florida. 25X1

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- Memo, [redacted], O/Ch/G, 1 Apr 57, 25X1  
 sub: Expenses and Itinerary of Trip to Eglin AFB,  
 Florida.
- Memo, [redacted], O/Ch/G, 3 Apr 57, 25X1  
 sub: Expenses and Itinerary of Trip to Eglin AFB,  
 Florida.
167. Interview, [redacted] with author, 20 Jul 71, p. 25X1  
 1. TS.
168. See reference 46, above, pp. 14, 15.
169. See reference 46, above, pp. 17, 18.
170. See reference 25, above, pp. 11ff.
171. Memo, Reber for Bissell, 27 Mar 57, sub: Highest  
 and High Priority Targets for Western USSR, the  
 Far East, and European Satellites. S CODEWORD.
172. Minutes of the HTA Staff Meeting, 1 Feb 57, p. 2.
173. Memo, [redacted] for Lundahl, 15 Aug 56, sub: Field 25X1  
 Inspection of Nuclear Energy Installations.
174. Memo, [redacted] 24 Apr 57, sub: Report 25X1  
 of Trip to Guided Missile and Atomic Energy In-  
 stallations. S CODEWORD.
175. Memo, [redacted] 29 Jul 57, sub: Report of 25X1  
 Field Trip to Guided Missile Facilities. S CODEWORD.
176. Monthly Report for the Photo Intelligence Division,  
 May 57, p. 3.
177. Monthly Report for the Photo Intelligence Division,  
 Jul 57, p. 3.
178. See reference 176, above.
179. Monthly Report for the Photo Intelligence Division,  
 Jun 57, p. 3.
180. Monthly Report for the Special Projects Branch,  
 Jul 57.  
 Monthly Report for the Technical Intelligence Branch,  
 Jul 57, p. 2.

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- 181. Monthly Report for the Photo Intelligence Division,  
Mar 57, p. 3.
- 182. See reference 176, above.
- 183. Monthly Report for the Photo Intelligence Division,  
Apr 57, p. 3.  
See reference 176, above.  
Monthly Report for the Special Projects Branch, Jun  
57.
- 184. See reference 179, above.
- 185. Minutes of the Geographic Research Area Staff  
Meeting, 13 May 57.
- 186. Monthly Report for the Photo Intelligence Division,  
Aug 57, p. 2.
- 187. See reference 177, above, p. 2.
- 188. See reference 185, above.
- 189. Monthly Report for the Photo Intelligence Division,  
Apr 57, p. 2.  
See reference 176, above, p. 2.  
See reference 179, above, p. 2.  
See reference 177, above, p. 2.
- 190. Monthly Report for the Photo Intelligence Division,  
Apr 57, p. 2.  
See reference 176, above, p. 2.
- 191. See reference 167, above, p. 4.
- 192. Memo, [ ] 10 Jun 57, sub: Status 25X1  
Report for the Statistical Branch, May 57. S CODEWORD.
- 193. [ ] "A New Team of Projection Printers 25X1  
for Rectifying 9-Inch by 18-Inch High Tilt Photog-  
raphy," *Photogrammetric Engineering*, Vol. XXIII,  
No. 1, Mar 57, pp. 157-161. U.
- 194. See reference 124, above, p. 5.
- 195. Memo, Lundahl for [ ] 16 May 57, sub: Justi- 25X1  
fication for Alwac III-E Electronic Computer. EYES  
ONLY.

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196. *Ibid.*
197. See reference 124, above, p. 5.
198. See reference 195, above.
199. See reference 124, above, pp. 4, 5.
200. Memo, , 6 May 57, sub: Mini-card Tests.
201. *Ibid.*
202. See reference 137, above, pp. 4, 5.
203. Memo, Lundahl for Deputy Chief, OCR/SR, 6 May 57, sub: Assistance in Development of Stereoscopic Scanner for Aerial Film. C.
204. Monthly Report of the Support Staff, Jun 57, p. 1. S CODEWORD.
205. Monthly Report of the Support Staff, Jul 57, p. 1. S CODEWORD.
206. Monthly Reports of the Industrial Branch, Feb 57 and Apr 57. TS CODEWORD CIA IUO.
207. Monthly Reports of the Geographic Branch, Apr 57 and Jun 57, p. 2. S CODEWORD CIA IUO.
208. Monthly Report of the Industrial Branch, Jul 57, p. 1. TS CODEWORD CIA IUO.
209. Monthly Report of the Geographic Branch, Jul 57, p. 2. S CODEWORD CIA IUO.
210. See reference 207, above.
211. See reference 209, above.
212. Monthly Report of the Support Staff, Jun 57, p. 2. S CODEWORD.
213. Monthly Report of the Industrial Branch, May 57, p. 2. TS CODEWORD.

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214. Monthly Report of the Industrial Branch, Jun 57, p. 2. TS CODEWORD CIA IUO.
215. Memo, [ ] for AD/OSI, 21 May 57, sub: Comments Concerning the ATIC Report Titled "A Theory on the Identity of the Mozhaysk Installation" May 1957, [ ] TS CODEWORD. 25X1
216. *Ibid.*
217. Memo, [ ] for Lundahl, 20 Jun 57, sub: Ramo-Wooldridge Studies. S CIA IUO. 25X1
218. See reference 208, above, p. 2.
219. CIA/HTA M-13-57, 29 Apr 57, Probable Missile Launching Installation Near Balaklava, USSR. TS CODEWORD. CIA/HTA I-A6, 21 Sep 56, Probable Missile Site and/or Test Installation. TS CODEWORD.
220. CIA/HTA M-35-57, 18 Sep 57, Unidentified Installation Near Karangit, USSR. TS CODEWORD.
221. John D. Morris. "President Signs Mideast Doctrine," *New York Times*, 10 Mar 57, p. 1. U.
222. Monthly Report of the Special Projects Branch, June 57.
223. Memo, Reber for Bissell, 13 May 57, sub: Comparative Film Processing Study, [ ] TS CODEWORD. 25X1
224. Memo, Bissell for Reber, 28 Jun 57, sub: Review of the Necessity for Continuation of Eastman Kodak Processing in Whole or in Part, [ ] TS CODEWORD. 25X1
225. Memo for the record, 25 Jul 57, sub: Visit to Eastman on 24 Jul 57, SAPC-17907.
226. Memo [ ] for Project Director of Operations, 25 Jul 57, sub: Use of A-2 or B Configuration, HTA/OC 67-57. 25X1
227. Minutes of the Ad Hoc Requirements Committee, 16 Aug 57, [ ] (ARC-M-49). TS CODEWORD. 25X1

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228. Memo, Lundahl [ ] 21 May 54, sub: Papers Suggesting Idealizations and Difficulties of the Present U.S. Photographic Intelligence System. 25X1
229. Memo, Lundahl [ ] 25 Sep 54, sub: Desirability of Establishing a Sub-Committee on Photographic Intelligence at the IAC Level, [ ] TS. 25X1
230. Memo, [ ] 15 May 57, sub: Implementation of ORR's Coordinating Responsibilities. S CIA IUO. 25X1
231. *Ibid.*
232. Memo, Reber for [ ] 23 Apr 57, sub: HTA and Mr. Arthur C. Lundahl, ER-9-2794. 25X1
233. Memo, Lundahl [ ] 3 Jul 57, sub: Briefing [ ] at HTA on 25-26 June 1957, [ ] (HTA/OC-61-57). TS CODEWORD. 25X1
234. Memo, [ ] 10 Jul 57, sub: Status Report for the Statistical Branch - June 1957. S CODEWORD. 25X1
235. See reference 172, above.
236. Memo, [ ] for Lundahl, 28 Jun 57, sub: Branch Reorganization Plan. No classification. 25X1
237. Memo, [ ] for Lundahl, Stallings, [ ] 24 Jun 57, sub: Estimated Personnel Requirements for Sov Bloc Branch. 25X1
238. Memo, [ ] for Lundahl, 21 Jun 57, sub: Suggestions Concerning Reorganization. S CIA IUO. 25X1
239. Monthly Report of the Industrial Branch, Jun 57, p. 1. TS CODEWORD CIA IUO.
240. See reference 238, above.
241. *Ibid.*
242. Memo, [ ] 28 Jun 57, sub: HTAUTOMAT Chart and Security Office Responsibility, [ ] S CODEWORD. 25X1



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243. Minutes of the HTA Staff Meeting, 12 Jul 57, p. 1.
244. Monthly Report of the Technical Intelligence Branch, Jul 57, p. 2.
245. Minutes of the HTA Staff Meeting, 26 Jul 57, p. 1.
246. See reference 209, above.
247. Minutes of the AQUATONE Staff Meeting, 23 Jul 57, p. 1, TS 164269. TS.
248. CIA/NPIC Mission Folders for:  
     B 4035, 5 Aug 57  
     B 4036, 5 Aug 57  
     B 4039, 12 Aug 57  
     B 4045, 21 Aug 57  
     B 4048, 21 Aug 57  
     B 4049, 22 Aug 57  
     B 4050, 22 Aug 57  
     B 4058, 28 Aug 57  
     B 4059, 10 Sep 57  
     C 6008, 16 Sep 57  
     A 2040, 13 Oct 57  
     Filed in Production Services Group, NPIC.  
     TS CODEWORD.
249. NPIC Technical Services Group, Collection Systems Branch, Aircraft Missions History (Looseleaf), n.p. (This is a working and reference volume maintained by the component indicated. It is not included in the NPIC Historical Collection.) TS CODEWORD.
250. CIA/NPIC Mission Folder for B 4059, filed in Production Services Group, NPIC. TS CODEWORD.
251. Response to a question from [redacted] chief, Collection Systems Branch, NPIC/TSG. 25X1
252. *Ibid.*
253. See reference 243, above.
254. ~~Memo~~, Lundahl for [redacted] 9 Jan 58, sub: Withholding of Periodic Step Increase, [redacted] 25X1  
     25X1

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- 255. *Photogrammetric Engineering*, Vol XXXVII, No. 1, Jan 71, p. 41. U.
- 256. Monthly Report of the Geographic Branch, Dec 57, p. 2. S CODEWORD CIA IUO.
- 257. Monthly Report of the Geographic Branch, Jan 58, p. 2. S CODEWORD CIA IUO.
- 258. Monthly Report of the Geographic Branch, Jul 57, p. 2. S CODEWORD CIA IUO.  
Monthly Report of the Military-Scientific Branch, Jul 57, p. 1. TS CODEWORD.
- 259. See reference 244, above.
- 260. Memo, [ ] for AD/OCR, 13 Sep 57, sub: Status Report for the Statistical Branch - Aug 57, pp. 1, 2. S CODEWORD. 25X1  
Memo, [ ] for AD/OCR, 8 Oct 57, sub: Status Report for the Statistical Branch - Sep 57, p. 1. S CODEWORD. 25X1
- 261. *Ibid.*, p. 2 in both documents.
- 262. Monthly Report of the Support Staff, Aug 57, p. 2. No classification.
- 263. Memo, [ ] for AD/OCR, 13 Sep 57, sub: Status Report for the Statistical Branch - Aug 57, p. 1. S CODEWORD. 25X1
- 264. *Ibid.*, Annex B.
- 265. *Ibid.*, p. 3.
- 266. Monthly Report of the Technical Intelligence (Services) Branch, Aug 57. TS CODEWORD.
- 267. Memo, [ ] for AD/OCR, 8 Oct 57, sub: Status Report for the Statistical Branch - Sep 57, p. 4. S CODEWORD. 25X1
- 268. Minutes of the HTA Staff Meeting, 6 Sep 57, p. 1.
- 269. Interview, Arthur C. Lundahl with author, 16 May 71, pp. 7ff. TS CODEWORD.

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270. See reference 262, above.
271. Monthly Report of the Support Staff, Jul 57, p. 2.  
S CODEWORD.
272. Monthly Report of the Geographic Branch, Aug 57,  
pp. 1, 2. S CODEWORD CIA IUO.
273. *Ibid.*
274. Minutes of the Utilization Advisory Board Meeting,  
5 Aug 57, p. 2, [ ] S CODEWORD. 25X1
275. See reference 262, above.
276. Monthly Report of the Technical Intelligence (Ser-  
vices) Branch, Jul 57, p. 1. TS CODEWORD.
277. See reference 266, above, p. 2.
278. Monthly Report of the Technical Intelligence (Ser-  
vices) Branch, Sep 57, p. 2. TS CODEWORD.  
Memo, [ ] 18 Sep 57, sub: 25X1  
Report of Expenses.
279. Memo, [ ] for Lundahl, 19 Jul 57, sub: Air 25X1  
Photo Missions.
280. Monthly Report for the Photo Intelligence Division,  
Aug 57, p. 2.
281. Progress Report of the Geographic Area, ORR, Aug 57,  
p. 3.
282. See reference 280, above.
283. Monthly Report for the Photo Intelligence Division,  
Sep 57, p. 2.
284. CIA/ORR PIM-2, Sep 57, *A Guide to the Collection of  
Ground Intelligence Photography on Ports and Har-  
bors.* C.
285. Memo [ ] 3 Jun 53, sub: Guidance 25X1  
in Requirements for Ground Photography.  
Memo, [ ] 30 Jun 53, sub: Guidance 25X1  
in Requirements for Ground Photography.

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286. Memo, [redacted], 12 Aug 57, sub: Report of Trip to Hycon Manufacturing Co., Telecomputing Corp., Chicago Aerial Industries, and Acme Teletronix, Inc., [redacted] (HTA-OC-71-57). S CODEWORD. 25X1
287. See reference 283, above.
288. See reference 268, above.
289. See reference 283, above.
290. Memo, Lundahl for all Branch Chiefs, 29 Aug 57, sub: Weekly Status Report. C.
291. Memo, Lundahl for [redacted] 28 Oct 57, sub: Request for Personnel Ceiling Increase. 25X1
292. See reference 263, above, p. 4.
293. See reference 14, above, p. 10.
294. See reference 291, above.
295. See reference 263, above, p. 4.
296. Memo, [redacted] for Acting DD/Intelligence, 10 Aug 53, sub: Organizational and Production Problems Resulting from Personnel Ceiling of 890 for ORR. Memo, [redacted] for Area Chiefs and OAD Staff Chiefs, 22 Aug 55, sub: Reduction in Personnel Ceiling for Fiscal Year 1956. 25X1
297. Monthly Report of the Military-Scientific Branch, Sep 57, p. 1. TS CODEWORD.
298. HTA/MSB Attachment to Notice No. 2, 25 Sep 57. TS CODEWORD.
299. See reference 297, above.
300. Memo, Lundahl for Principals of Operation JAM SESSION, 24 Sep 57, sub: Working and Consultation Time Schedule Operation JAM SESSION. TS CODEWORD.
301. Monthly Report of the Military-Scientific Branch, Oct 57, p. 1. S CIA IUO.

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302. *CIA Atomic Energy Activities at Berezki, North of Tomsk in Mid-Siberia*, Draft 1, pp. 21-22, 21 Sep 59, [ ] TS CODEWORD. 25X1
303. CIA/HTA JR-1-58, 28 Feb 58, *Tomsk Atomic Energy Installation*. TS CODEWORD.
304. Memo, [ ] [sic] for AD/OCR, 19 Nov 57, sub: Status Report for the Statistical Division [sic], October 1957, p. 2. TS CODEWORD. 25X1
305. "Text of Satellite Report," *New York Times*, 5 Oct 57, p. 3. U.
306. Guided Missile Intelligence Committee. Report of the Special Engineering Analysis Group, 27 Nov 57, p. i., [ ] TS CODEWORD. 25X1
307. "Texts of the Moscow Announcements on Satellite," *New York Times*, 4 Nov 57, p. 8. U.
308. CIA/HTA B-89-57, 23 Aug 57, Tyura Tam Guided Missile Range Head. TS CODEWORD.
309. CIA/HTA JR-4-58, Sep 58, *Missile Launching Complex and Test Range, Tyura Tam, USSR*. TS CODEWORD.
310. Memo, Lundahl for Amory, 15 Oct 57, sub: TALENT Annex to the Semi-Annual Report to the President's Board, p. 1., [ ] TS CODEWORD. 25X1  
See reference 306, above, p. 14.
311. CIA/NPIC Mission Folder for B 4059, 10 Sep 57. TS CODEWORD.
312. See reference 306, above.
313. CIA/HTA Joint (Army, Navy, CIA) Preliminary Intelligence Study: Kapustin Yar, (5 Vol), n.d., [ ] TS CODEWORD. 25X1
314. Monthly Report of the Military-Scientific Branch, Dec 57, p. 1. S CODEWORD.
315. Minutes of the HTA Staff Meeting, 6 Dec 57, p. 2. S CODEWORD CIA IUO.

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316. Memo, [ ] for All Participants in Operation JAM SESSION, 18 Dec 57, sub: Your Contribution to the Success of Operation JAM SESSION, [ ] TS CODEWORD. 25X1  
25X1
317. Letter, [ ] for A. C. Lundahl, 6 Dec 57. C. 25X1
318. Letter, [ ] for Lundahl, 23 Dec 57. C. 25X1
319. Memo, [ ], for Lundahl, 11 Feb 58, sub: Contributions of HTA During JAM SESSION. C. 25X1
320. Letter, [ ] to Lundahl, 3 Oct 57, sub: Letter of Appreciation. U. 25X1  
Memo, Lundahl for AD/RR, 3 Dec 57, sub: Commendations Received from the Joint Chiefs of Staff.
321. Memo, Lundahl for [ ] 29 Nov 57, sub: Lundahl and [ ] 16 to 22 Nov 57, [ ] S CODEWORD. 25X1  
25X1  
25X1
322. Minutes of the HTA Staff Meeting, 13 Dec 57, p. 1. S CODEWORD CIA IUO.
323. Letter, [ ], 20 Nov 57, sub: Appreciation for the Lundahl Briefing. TS and Personal. 25X1
324. Letter, [ ] for Lundahl, 29 Nov 57, sub: Appreciation for the Briefing [ ] U. 25X1  
25X1
325. Letter, [ ] for Allen W. Dulles, 26 Nov 57, sub: Appreciation for [ ] 25X1  
25X1
326. Memo, Allen W. Dulles for Lundahl, 11 Dec 57, sub: Letter of Appreciation.
327. Memo, Reber for [ ] 31 Oct 57, sub: Briefing Tour of European Theater Commands, [ ] S CODEWORD. 25X1  
25X1
328. See reference 304, above, p. 4.
329. Minutes of the Ad Hoc Requirements Committee on Project AQUATONE, 7 Nov 57, pp. 1, 2, [ ] S CODEWORD. 25X1

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330. Letter [ ] for Lundahl, 20 Dec 57, sub: Points of Difference Between Material in Briefing and Positions of OSI, [ ] TS CODEWORD. 25X1  
25X1
331. Memo for the record, 16 Mar 73, sub: Conversation with [ ] Concerning DGP/OSB Work. 25X1  
Memo for the record, 19 Mar 73, sub: Conversation with [ ] Concerning DGP/OSB Work. 25X1
332. Minutes of the Geographic Research Area Staff Meeting, 25 Feb 58.
333. Memo [ ] 6 Sep 57, sub: SENSINT Control System Implementation, CST 571. S CODEWORD. 25X1
334. Memo, [ ] 29 Oct 57, sub: SENSINT Control System Implementation, CST 688. S CODEWORD. 25X1
335. Memo, [ ] 24 Oct 57, sub: General Lewis' 6 September 1957 Memorandum, subject: SENSINT Control System Implementation, CST 633. S CODEWORD. 25X1
336. Monthly Reports of the Geographic Branch, Sep 57, Oct 57, Nov 57. S CODEWORD CIA IUO.
337. Monthly Report of the Central Branch, Nov 57.
338. Memo [ ], 18 Dec 57, sub: Project Initiation Memorandum: Sibolga, Indonesia, and Vicinity. 25X1
339. Memo, [ ], 25 Sep 57, sub: Meeting to Evaluate Existing Photography, SAPC 19486. 25X1  
Memo, Lundahl for Bissell, 26 Sep 57, sub: 2 October Meeting for the Purpose of Evaluating Existing Photography, [ ] S CODEWORD. 25X1  
CIA/HTA Program-Proposed Discussion Outline, 2 Oct 57. No classification.
340. Memo for the record, 14 Oct 57, sub: Report of Photographic Suppliers Meeting Held at Boston, Mass., on 9 October 1957. 25X1  
Memo, [ ] for Lundahl, 15 Oct 57, sub: Trip Report - 9 Oct Suppliers Meeting at Boston (Photographic Configurations - related matters), [ ] 25X1  
[ ] TS CODEWORD. 25X1

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341. Minutes of the HTA Staff, 6 Sep 57, p. 1.  
See reference 283, above, p. 1.
342. Interview, [ ] with author, 11 Jul 72, 25X1  
pp. 4-7. TS CODEWORD.
343. Monthly Reports of the Technical Intelligence  
(Services) Branch, Oct and Nov 57, p. 1. TS CODE-  
WORD.
344. See reference 342, above.
345. *Ibid.*, pp. 16, 17.
346. Monthly Reports of the Technical Intelligence (Ser-  
vices) Branch, Nov and Dec 57, p. 1. TS CODEWORD.
347. See reference 342, above, p. 21.
348. See reference 267, above, p. 1.
349. Monthly Report of the Support Staff, Nov 57, p. 3.  
S CODEWORD.
350. See reference 290, above.
351. Monthly Report of the Support Staff, Dec 57, p. 2.  
S CODEWORD.
352. See reference 349, above, p. 1.
353. See reference 304, above, p. 5.
354. OCR/SB December (1957) Status Report Supplement,  
p. 1, [ ] TS CODEWORD. 25X1
355. Memo, Borel for Amory, 23 Oct 57, sub: Proposed  
Organizational Changes in Statistical Branch.
356. Draft memo, no signature line, for Amory, 26 Sep 57,  
sub: Division Status for the Statistical Branch,  
SR/CR. No classification.
357. See reference 291, above.
358. Monthly Report of the Military-Scientific Branch,  
Dec 57, p. 1. S CODEWORD.

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359.

25X1

360.

361. Memo, [ ] for Chairman JAEIC, 17 Dec 57,  
sub: Progress Report on JAEIC Working Group, Ex-  
ploitation of TALENT Material: Novosibirsk, [ ]  
[ ] TS CODEWORD.

25X1

25X1  
25X1

362.

25X1

363.

364. See reference 361, above.

365. Monthly Report of the Military-Scientific Branch,  
Feb 58, p. 1. TS CODEWORD.

366.

25X1

367. See reference 330, above.

368. See reference 330, above.

369. Interview, Arthur C. Lundahl with author, 16 May 72,  
pp. 23, 24. TS CODEWORD.

370. *Ibid.*, pp. 25, 26.

371. Letter, [ ] to Dulles, 8 Mar 58, sub:  
Briefing by Lundahl. C.

25X1

372. Monthly Report of the Geographic Branch, Dec 57,  
pp. 1, 2. S CODEWORD CIA IUO.

373. Monthly Report of the Geographic Branch, Jan 58,  
pp. 1, 2. S CODEWORD CIA IUO.

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- 374. Monthly Report of the Geographic Branch, Feb 58,  
pp. 1, 2. S CODEWORD CIA IUO.
- 375. Monthly Report of the Central Branch, Dec 57, p. 1.  
Monthly Report of the Central Branch, Jan 58, p. 1.
- 376. Monthly Report of the Central Branch, Mar 58, p. 1.
- 377. Monthly Report of the Central Branch, Feb 58, p. 1.
- 378. Memo, Support Staff for all branches, n.d., sub:  
Procedures Governing the Establishment, Assign-  
ment, Progress Reporting and Final Disposition of  
HTAUTOMAT Projects. No classification.
- 379. Memo, [redacted] 25X1  
19 Feb 58, sub: Procedures Proposed for Handling  
of HTAUTOMAT Projects.
- 380. Memo, [redacted] 24 Feb 58, sub: Comments as 25X1  
Requested on Support Staff Memo on Procedures for  
Handling HTA Projects.
- 381. Memo [redacted] for all MSB Personnel and Joint PI 25X1  
Team Participants, 26 Feb 58, sub: Use of Attached  
"Graphics Request and Project Report."
- 382. Monthly Report of the Support Staff, Dec 57, p. 4.  
S CODEWORD.  
Monthly Report of the Photo Intelligence Division,  
Dec 57, p. 2.
- 383. Memo, [redacted] for AD/CR, sub: Status Report for 25X1  
the Statistical Division, OCR, Dec 57, p. 2.
- 384. Memo, [redacted] for AD/CR, sub: Status Report for 25X1  
the Statistical Division, OCR - Feb 1958, p. 2.
- 385. See reference 379, above, p. 1.
- 386. See reference 380, above.
- 387. See reference 380, above, p. 1.  
Memo, [redacted] for AD/CR, sub: Status Report for 25X1  
the Statistical Division, OCR - Mar 1958, p. 2.
- 388. See reference 379, above.

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389. See reference 380, above.
390. See reference 379, above.
391. See reference 380, above.
392. March (1958) Status Report Supplement [redacted] 25X1  
to AD/CR), p. 3. S CODEWORD.
393. Memo, [redacted] for AD/CR, sub: Status Report for 25X1  
the Statistical Division, OCR, Jan 1958, p. 2.
394. Monthly Report of the Industrial [sic] Branch, Jan  
58, p. 1.
395. Monthly Report of the Special Projects [sic] Branch,  
Jan 58, p. 1.
396. CIA/HS *National Photographic Interpretation Center;*  
*Antecedents and Early Years 1952-56*, (The DDI  
Historical Series, NPIC-2), Dec 72, pp. 139ff.
397. See reference 322, above.
398. CIA/OCR Notice CR 20-190-9, 13 Nov 57. OUO.
399. See reference 383, above, p. 1.
400. Memo, [redacted] 16 Jan 58 [sic], sub: Re- 25X1  
organization of Statistical Branch, Special Register,  
Office of Special Reference.
401. See reference 322, above, p. 2.
402. Memo, [redacted] or Lundahl, 3 Jan 55, sub: In- 25X1  
crease in T/O for Project HTAUTOMAT.
403. Monthly Report of the Technical Intelligence (Ser-  
vices) Branch, Jan 58, p. 1. TS CODEWORD.
404. Monthly Report of the Technical Intelligence (Ser-  
vices) Branch, Feb 58, p. 1. TS CODEWORD.
405. Monthly Report of the Technical Intelligence (Ser-  
vices) Branch, Mar 58, p. 1. TS CODEWORD.

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406. Monthly Report of the Technical Intelligence (Services) Branch, May 58, p. 1. S CODEWORD.  
Monthly Report of the Special Projects Branch [sic], May 58, p. 1. S CODEWORD.
407. Memo, [ ] for Lundahl, 20 Jan 58, sub: Proposals Concerning the Reorganization of the Photo Intelligence Division. S EYES ONLY. 25X1
408. Monthly Report of the Photo Intelligence Division, Jan 58, p. 3.
409. See reference 407, above, p. 1.
410. Memo, Lundahl for [ ] 7 Mar 58, sub: Proposal for the Establishment of the Photographic Intelligence Center, [ ] TS CODEWORD. 25X1  
25X1
411. Monthly Report of the Photo Intelligence Division, Mar 58, p. 2.
412. See reference 298, above.
413. Memo, [ ] 7 May 58, sub: Items for Consideration in Establishing Directives for HTA Reporting, Joint Reporting, Priorities, etc., (HTA/MSB/39/58). S CIA IUO. 25X1
414. Monthly Reports of the Military-Scientific Branch, Apr and May 58, p. 1.
415. Memo, [ ] and the Editorial Staff, HTA, 17 May 58, sub: Completion of KY Report. S CIA IUO. 25X1
416. Memo, Lundahl for [ ] 31 Mar 58, sub: European Briefing Trip, [ ] TS CODEWORD. 25X1  
25X1
417. Interview, Arthur C. Lundahl with author, 11 Jan 71, pp. 1, 2. TS CODEWORD.
418. Memo, Lundahl for Dulles, 9 Apr 58, sub: Comments [ ] during our Briefing of him on 17 March 1958. S EYES ONLY. 25X1  
See reference 416, above.
419. See reference 417, above, pp. 3-6.

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420. See reference 416, above.
421. Memo, [ ] for the record, 8 Jul 58, sub: Plans 25X1  
for [ ] briefing, [ ] S CODEWORD. 25X1  
Memo for the record, 11 Jun 73, sub: The [ ] 25X1  
Briefing of 11 July 1958.
422. [ ] 25X1
423. See reference 421, above.
424. See reference 422, above.
425. Monthly Report of the Military-Scientific Branch,  
May 58, p. 1. S CODEWORD.
426. Interview, [ ] with author, 21 Nov 25X1  
72, pp. 15-17.
427. [ ] 25X1
428. [ ]
429. See reference 426, above, pp. 19, 20.
430. See reference 428, above, p. 2.
431. Monthly Report of the Military-Scientific Branch,  
Jul 58, p. 1.
432. See reference 425, above.
433. See reference 431, above.
434. Monthly Report of the Military-Scientific Branch,  
Apr 58, p. 1.
435. Memo, [ ], 28 May 58, sub: Report on 25X1  
Mining and Milling Field Trip.

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436. Memo, [ ] for Lundahl, 23 May 58, sub: Recommendations Following Guided Missile Trip. S CIA IUO. 25X1
437. Memo, [ ] for Lundahl, 27 May 58, sub: AE, GM, BW Field Trip. 25X1
438. Memo, [ ] 7 May 58, sub: JAEIC Consultants' Meetings. Monthly Report of the Military-Scientific Branch, Jun 58, p. 1. S CODEWORD. 25X1
439. See reference 425, above, p. 1.
440. [ ] 25X1
441. See reference 438, above.
442. CIA/HTA Mining and Milling, Soviet Bloc. 9 Jun 58, [ ] TS CODEWORD. 25X1
443. CIA/OSI Transcript of Consultant Meetings on Mining and Milling of Uraniferous Ores in the Soviet Bloc. Section D, 19 Jun 58, [ ] TS CODEWORD. 25X1
444. Monthly Report of the Military-Scientific Branch, Jun 58, p. 1. S CODEWORD.
445. [ ] 25X1
446. CIA/HTA MCS-2-58, 31 Mar 58, *Joint Mission Coverage Summary, Mission C 6011*. TS CODEWORD.
447. Monthly Reports of the Geographic Branch, Mar-Jun 58, p. 2. S CODEWORD CIA IUO.
448. Monthly Report of the Geographic Branch, May 58, p. 3. S CODEWORD CIA IUO.
449. Monthly Reports of the Geographic Branch, Mar and Apr 58, p. 1. S CODEWORD CIA IUO.

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- 450. Monthly Report of the Geographic Branch, Apr 58, p. 2. S CODEWORD CIA IUO.
- 451. CIA/HTA Bi-Weekly Project Status Report, 29 May 58, p. 4. S CODEWORD.
- 452. See reference 450, above.  
CIA/HTA Answers to Requirements Submitted in Travel Folder Brief of Komsomolsk, USSR, 6 May 58. TS CODEWORD.
- 453. Monthly Report of the Geographic Branch, Jun [sic] 58, p. 2. S CODEWORD CIA IUO.
- 454. Monthly Reports of the Geographic Branch, May and Jun 58, p. 1. S CODEWORD CIA IUO.
- 455. See reference 449, above.
- 456. See reference 392, above, pp. 1, 2.
- 457. See reference 448, above, p. 2.
- 458. See reference 131, above.
- 459. See reference 453, above.
- 460. CIA/HTA Bi-Weekly Project Status Report, 30 Apr 58, pp. 3, 4. S CODEWORD.
- 461. See reference 131, above.
- 462. "World Affairs: Middle East," *Facts on File*, Vol. XVIII, No. 924, 10-16 Jul 58, p. 225. U.
- 463. See reference 131, above.
- 464. Procedural Memorandum, Lundahl for All Branches, HTAUTOMAT, 10 Apr 58, sub: Procedures Governing the Establishment, Assignment, Progress Reporting and Final Disposition of HTAUTOMAT Projects.
- 465. See reference 378, above.
- 466. See reference 380, above.
- 467. Procedural Memorandum, Lundahl for All Branches, HTAUTOMAT, 28 May 58, sub: Procedures Governing the

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## Preparation and Publication of HTAUTOMAT Photographic Intelligence Reports.

468. Memo, [ ] for Lundahl, attn: [ ] 7 May 58, 25X1  
sub: Items for Consideration in Establishing Directives for HTA Reporting, Joint Reporting, Priorities, etc. S CIA IUO.
469. Procedural Memorandum, Lundahl for All Branches, HTAUTOMAT, 3 Jun 58, sub: Priority Designation. C.
470. Memo, Lundahl, [ ] for 25X1  
PIC Divisions and Military Liaison Offices, 15 Jul 58, sub: Establishment of the Photographic Intelligence Center (HTAUTOMAT) Joint Project Requirements Committee.
471. Memo, Lundahl, [ ] for 25X1  
All Divisions and Military Liaison Offices, 15 Jul 58, sub: Procedures Governing the Preparation and Publication of Joint Photographic Intelligence Reports.
472. Monthly Reports of the Technical Intelligence (Services) Branch, Apr, TS CODEWORD, and May 58, S CODEWORD.
473. [ ] Introduction (draft) to a 25X1  
projected paper entitled "The High Precision Stereocomparator." (Unpublished). No classification.
474. Memo for the record, 13 Jul 73, sub: Identification of the Mann Comparator First Used with the TELECORDEX. C.
475. Monthly Report of the Technical Intelligence (Services) Branch, May 58, p. 1. S CODEWORD.  
Memo, [ ] 11 Jun 58, sub: Receipt of 25X1  
TELECORDEX. C.
476. Memo [ ] 2 Aug 57, sub: Report of 25X1  
Trip to Hycon Manufacturing Co., Telecomputing Corp., Chicago Aerial Industries, and Acme Teletronix, Inc., p. 2.

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477. Memo, Lundahl for Chief, Business Machines Services, Management Staff, 28 Mar 58, sub: Justification for Purchase of Additional Equipment for the Project HTAUTOMAT Computing Facility.
478. Memo, Lundahl for Chief, Administrative Staff, ORR, 31 Mar 58, sub: Renewal of Service Contract for Maintenance of the ALWAC III-E Computer.
479. Monthly Report of the Technical Intelligence (Services) Branch, May 58, p. 1. S CODEWORD.
480. Memo, Lundahl for [ ] 15 Oct 57, sub: Trip to the Strategic Air Command, Offutt AFB, Omaha, Nebraska. 25X1
481. Monthly Report of the Photo Intelligence Division, May 58, p. 4.
482. See reference 342, above, p. 15.
483. Memo, [ ] 26 May 58, sub: Visit of SAC Personnel to HTA. C. 25X1
484. [ ] 25X1
485. [ ]
486. [ ] National Photographic Interpretation Center Relationships with Foreign Governments (First Draft), p. 38. TS CODEWORD. 25X1
487. [ ] 25X1
488. [ ]
489. [ ]

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25X1

490.

491. CIA Notice No. 1-130-5, "Office of the Deputy Director (Intelligence): Photographic Intelligence Center," 19 Aug 58.

492. Memo (draft), [ ] for Comptroller, 31 Jul 58, sub: Establishment of the Photographic Intelligence Center, Deputy Director (Intelligence) Area.

25X1

Memo (draft), [ ] 31 Jul 58, sub: Establishment of the Photographic Intelligence Center.

25X1

493. Memo, [ ] 15 Jul 58, sub: Photographic Intelligence Center Table of Organization.

25X1

494. Memo, Lundahl for Bissell, 18 Aug 58, sub: Follow-up on our Discussion of 117L Advisory Committee Meeting in Los Angeles.

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